



U.S. Department
of Transportation

**National Highway
Traffic Safety
Administration**

400 Seventh Street, S.W.
Washington, D.C. 20590

Dear Crash Data Researchers/Users:

Thank you for choosing crash data from the National Highway Traffic Safety Administration (NHTSA) for your research or other use. The information contained in this motor vehicle crash report is collected, maintained and distributed in accordance with Public Law 89-564. In accordance with this Public Law, NHTSA is required not to release any case information until completion of quality control procedures. These procedures include a review of the case material to extract all names, licenses and registration numbers, non-coded interview material, non-research related researcher comments in the margins, non-factual data, and the production number portion of the vehicle identification number (VIN).

If you requested NHTSA to query its database files in order to identify a specific crash, then that query was made using non-personal descriptors you provided for use in our search. This motor vehicle crash may have been identified from a data search and matches the general, non-personal descriptors you provided, but we cannot confirm that this is the specific crash report you requested.

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DYNAMIC SCIENCE, INC.
In-Depth Accident Investigation

Contract DTNH22-87C-47169
Case DSI-93-AB-013

Remote
 1993

TECHNICAL SUMMARY

CONTRACTOR: Dynamic Science, Inc.
CONTRACT NUMBER: DTNH22-87C-47169
CASE NUMBER: Case DSI-93-AB-013

[REDACTED]

This two vehicle collision occurred on a three-lane, undivided, urban/business roadway in the afternoon hours of a summer weekday in [REDACTED]

Vehicle 1, a 1990 Ford Taurus four-door, was being driven southeast by the 46 year old female driver at a speed estimated to have been between 80 and 89 KPH (50 and 55 MPH). The driver was restrained by the available 3-point, manual lap/shoulder safety restraints. Sitting in the right front seating position was occupant 2, a 13 year old female, who was wearing the available 3-point, manual lap/shoulder safety restraints. A 9 year old female, occupant 3, was seated in the left rear seating position and was restrained by the available 3-point, manual lap/shoulder safety restraints.

Vehicle 2, a 1978 Mercedes Benz 450SEL four-door, was being driven northwest in a dedicated turn lane at a speed estimated to have been between 16 and 24 KPH (10 and 15 MPH) by the 51 year old male driver. Vehicle 2 was in the process of turning left into a business driveway and was driven into the travel path of Vehicle 1. The right front plane of Vehicle 1 impacted the right rear side plane of Vehicle 2 in a right angle configuration. The forces of this impact exceeded the manufacturer's threshold in the driver's side supplemental restraint system and the airbag deployed.

The airbag module was subsequently found to be defective and was part of a [REDACTED] recall issued in [REDACTED] 1990. The defect in the airbag module resulted in a flash fire that burned the driver of Vehicle 1.

The Delta V for Vehicle 1 in this impact was computed, using the Missing Vehicle Algorithm, as 9.6 KPH (6.0 MPH) using a CDC of 12FZEW1 and a PDOF of 000 degrees. The combined direct and induced damage width was 152 cm (60 in) and the maximum crush depth was 5 cm (2.2 in) at C₅. The Delta V for Vehicle 2, computed using the Missing Vehicle Algorithm, was 7.4 KPH (4.6 MPH). Vehicle 2 was not inspected as it had been repaired and the owner refused access because of pending litigation.

The driver of Vehicle 1 allegedly sustained burns of a relatively minor nature; maximum AIS = AIS-1. She did not require extrication from the vehicle and was transported to a local hospital where she was admitted for treatment. Occupants 2 and 3 in Vehicle 2 sustained no injury in this accident.

The driver of Vehicle 2, as reported by police, sustained no apparent injury in this accident.

Both vehicles were towed from the scene due to damage sustained in this accident.

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The crash investigation process is an inexact science which requires that physical evidence such as skid marks, vehicular damage measurements, and occupant contact points be coupled with the investigator's expert knowledge and experience of vehicle dynamics and occupant kinematics in order to determine the pre-crash, crash, and post-crash movements of involved vehicles and occupants.

Because each crash is a unique sequence of events, generalized conclusions cannot be made concerning the crashworthiness performance of the involved vehicle(s) or their safety systems.

DYNAMIC SCIENCE, INC.
ACCIDENT INVESTIGATION
CASE NUMBER: DSI-93-AB-013

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ACCIDENT DATA:

Location: [REDACTED]
Area/Type: Urban/Business
Date/Time: Summer/Afternoon
Accident Type: Car/Car - Right Angle

Injury Severity:

Vehicle 1: Driver (case occupant), AIS-1
R/F Occupant, no injury
L/R Occupant, no injury

Vehicle 2: Driver, reportedly not injured

AMBIENCE:

Viewing Conditions: No viewing restrictions
Cloud Cover: Clear
Precipitation: None
Temperature: 27 to 29 ° C (80 to 85 ° F)
Road Surface: Dry

ROADWAY:

	VEHICLE 1	VEHICLE 2
Type:	3-lane, undivided	3-lane, undivided
Width:	16.9 m (55.5 ft)	16.9 m (55.5 ft)
Traffic Density:	Moderate	Moderate
Median:	None	None
Edge:	3 m (10 ft) asphalt paved shoulder	3 m (9.8 ft) asphalt paved shoulder
Surface:	Asphalt	Asphalt
Reported Defects:	None	None
Co-efficient of Friction (est.):	.85	.85
Vertical Alignment:	Negative 4 %	Positive 4 %
Horizontal Alignment:	Straight	Straight

Traffic Controls:

	VEHICLE 1	VEHICLE 2
Signals:	None	None
Signs:	None	None
Speed Limit:	89 KPH (55 MPH)	89 KPH (55 MPH)
Markings:	Single, solid, white painted line separates south shoulder and southeast bound travel lane. Single, solid yellow painted line and single, broken yellow painted line separates southeast bound travel lane and dedicated center turn lane.	Single, solid, white painted line separates north shoulder and northwest bound travel lane. Single, solid yellow painted line and single, broken yellow painted line separates northwest bound travel lane and dedicated center turn lane.

VEHICLES:

	VEHICLE 1	VEHICLE 2
Description:	1990 Ford Taurus L 4-door	1978MercedesBenz450 SEL 4-door
Odometer:	151,847 km (94,356 mi)	Not inspected
Engine:	V8 / 3.0 L	
Vehicle Modifications:	None	
Tire Condition:	Good, 60 to 70 percent of tread remains. No abnormal tread wear patterns.	
Manual Restraints:	3-point, manual lap/shoulder safety restraints at L/F, R/F, L/R and R/R seating positions. 2-point lap restraints at C/F and C/R seating positions.	Vehiclewasrepairedand owner refused to allow inspection
Automatic Restraints:	Driver's side airbag	
Reported Defects:	Faulty airbag inflator	
Cargo:	None	
Windshield Damage:	Cracked by impact forces	
Fleet:	None	
Tow Status:	Towed due to damage	Towed due to damage

VEHICLE DAMAGE:

	VEHICLE 1	VEHICLE 2
Object Struck:	Vehicle 2	Vehicle 1
Event Number:	01	01
CDC:	12FZEW1	Not inspected
Maximum Crush:	5 cm (2.2 in) at C ₆	

VEHICLE VELOCITY ESTIMATES:

	VEHICLE 1	VEHICLE 2
Impact Speed: (estimated)	32-40 KPH (20-25 MPH)	16-24 KPH (10-15MPH)
Total Delta V:	9.6 KPH (6 MPH)	7.4 KPH (4.6 MPH)
Longitudinal Delta V:	-9.6 KPH (-6 MPH)	-4.2 KPH (-2.6 MPH)
Lateral Delta V:	0	-6 KPH (-3.8 MPH)
Energy Dissipation:	7205.3 joules (5314.9 ft-lb)	9511.0 joules (7015.7 ft-lb)

Calculations based upon: OLD MISS PC, Missing Vehicle
Algorithm

Speed, not to a stop formula -

$$V = \sqrt{VO^2 - 2 \cdot a \cdot D}$$

$$S = V \div 1.466$$

COLLISION SEQUENCE:

Pre-Crash: This two vehicle collision occurred during the afternoon hours of a summer weekday on a three-lane, undivided, asphalt paved, urban/business roadway in [REDACTED]. The weather was clear and the roadway was dry and free of defects. Traffic density was moderate, and there were no viewing restrictions. The posted speed limit was 89 KPH (55 MPH).

The northwest/southeast roadway is edged on the southwest by a 3 m (10 ft) asphalt paved shoulder. The southwest shoulder is separated from the southeast bound travel lane by a single, solid white painted line. The southeast bound travel lane is separated from the dedicated center turn lane by a single, solid, yellow painted line and a single, broken yellow painted line. The northwest bound travel lane is separated from the dedicated center turn lane by a single, broken yellow painted line and a single, solid yellow painted line. The northwest bound travel lane is separated from the 3 m (9.8 ft) northeast asphalt paved shoulder by a single, solid white painted line. The roadway is straight, the estimated coefficient of friction is .85 and there is a negative four percent downgrade for southeast bound traffic.

Vehicle 1, a 1990 Ford Taurus L four-door, was being driven southeast in the southeast bound travel lane by the 46 year old female driver (case occupant) at a speed estimated to have been between 80 and 89 KPH (50 and 55 MPH). The driver was wearing the available 3-point, manual lap/shoulder safety restraints. Sitting in the right front seating position was occupant 2, a 13 year old female, who was wearing the available 3-point, manual lap/shoulder safety restraints. Occupant 3, a 9 year old female, was sitting in the left rear seating position and was wearing the available 3-point, manual lap/shoulder safety restraints.

Vehicle 2, a 1978 Mercedes Benz 450SEL four-door, was being driven northwest, in the dedicated turn lane, by the 51 year old male driver at a speed estimated to have been between 16 and 24 KPH (10 and 15 MPH) as the driver began a left turn into a business driveway.

In the process of making the left turn, Vehicle 2 was driven into the southeast bound travel lane and the travel path of Vehicle 1. The driver of Vehicle 1 applied, and locked, the vehicle's brakes leaving 22.9 m (75 ft) of front wheel braking skid marks.

Crash: The right front plane of Vehicle 1 impacted the right rear side plane of Vehicle 2 in a right angle configuration. The Delta V for Vehicle 1 in

this impact was computed, using the Missing Vehicle Algorithm, as 9.6 KPH (6.0 MPH) using a CDC of 12FZEW1 and a PDOF of 000 degrees. The combined direct and induced damage width was 152 cm (60 in) and the maximum crush depth was 5 cm (2.2 in) at C_s. The Delta V for Vehicle 2, computed using the Missing Vehicle Algorithm, was 7.4 KPH (4.6 MPH). Vehicle 2 had been repaired prior to notification of this accident. In addition, the owner/driver of Vehicle 2 refused to cooperate, or allow inspection of his vehicle, due to pending litigation by the owner of Vehicle 1.

At impact, the forces involved in this accident exceeded the manufacturer's threshold in the Supplemental Restraint System in Vehicle 1 and the airbag deployed.

Post Crash:

There was no rotation or skidding by Vehicle 1 after impact, but a fire caused by a faulty airbag module burned and distracted the driver. As a result, Vehicle 1 rolled 50.4 m (165.4 ft) at a 20 degree angle from the POI to FRP facing east with the front wheels in a small drainage depression off the edge of the roadway, and the rear wheels on the northeast asphalt paved shoulder.

Vehicle 2 rotated approximately 70 degrees clockwise after impact and came to FRP facing northwest with the right front and rear wheels resting on the southwest asphalt paved shoulder of the roadway and the left front and rear wheels resting on a landscaped area at the southwest edge of the roadway.

Occupant Kinematics:

The 46 year old female driver of Vehicle 1 (case occupant) was seated on a split bench seat with separate backs. She appears to have been sitting in a normal, upright position with the 3-point, manual lap/shoulder safety restraints being worn in a normal and proper manner. There were no occupant contact points identified during the on-site vehicle inspection, and all injuries reported were burns resulting from the airbag fire.

The right front and left rear occupants of Vehicle 1 were both wearing the available 3-point, manual lap/shoulder safety restraints, and neither of these occupants sustained injury in this accident.

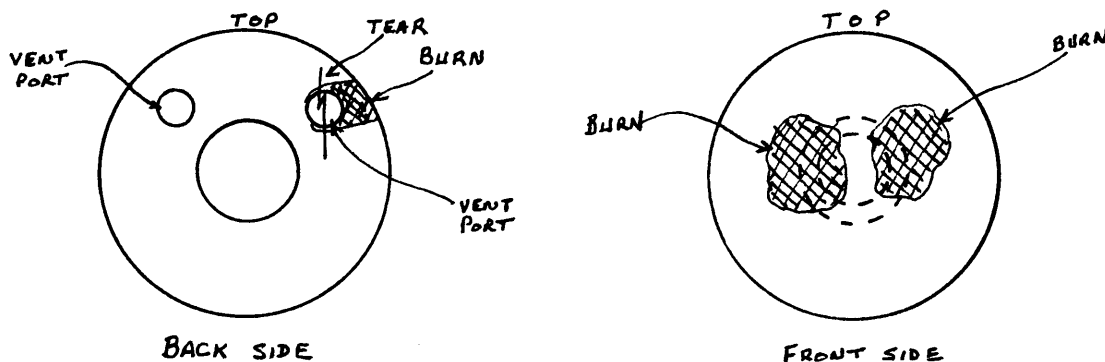
Airbag System:

Vehicle 1, the case vehicle, was equipped with a driver's side Supplement Restraint System that deployed as a result of the right front plane of Vehicle 1 impacting the right rear side plane of Vehicle 2 in a right angle configuration. As the airbag began to inflate, the module's center post gave way and the initiator was propelled from the module and a fire

resulted that burned two holes in the face of the airbag fabric opposite the two vent ports on the back side of the airbag.

The fire allegedly resulted in burns to the driver's left face, left eye, left arm, left hand, neck and chest. There was also extensive scorching of the vehicle's left instrument panel, windshield/windshield header, left side of the steering wheel rim, left front door window sill upward and slight scorching the right side of the left front seat back rest.

The airbag burn patterns are as follows:



The airbag module was manufactured by [REDACTED] and had the following numbers, and stamps, on the back of the module:

Bottom left side - Bar code with numbers

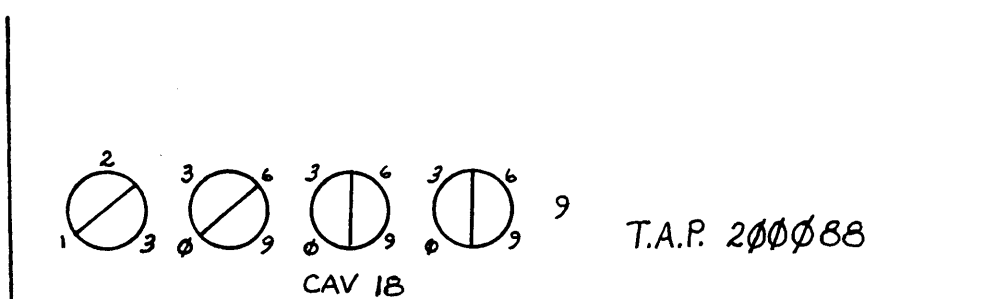
[REDACTED]
and the words: Dk. Regatta Blue

There was also a round stamp (in red) [REDACTED] 165

Bottom right side - Bar code with numbers

[REDACTED]
There was also a round stamp (in red) 96 [REDACTED]

In addition to the above, the following codes were stamped on the back side of the bottom flap of the airbag module:



At the time of the airbag module inspection, 51 days post accident, the airbag measured 64.8 cm (25.5 in) in diameter and the vent ports on the back side of the airbag measured 1.9 cm (.75 in) in diameter and were located near the top of the airbag. The vents were approximately 19.1 cm (7.5 in) apart - on center. Because of handling and testing by numerous others, there were no fold creases in the airbag fabric at the time of inspection.

Also at the time of inspection, the center post and adaptor had been removed from the module and had been examined and tested by an unknown number of examiners. The thread joints and the module itself were in poor condition with heavy corrosion and other deposits masking the threads. The custodians of the module would not permit removal of the corrosion for inspection and photographing.

In [REDACTED] 1990, while conducting a barrier crash test, [REDACTED] noted a separation of a production-level airbag inflator center post housing and adaptor. Subsequent analysis, according to [REDACTED] revealed significant damage to the threads in the housing of the adaptor joint. [REDACTED] states that this damage was consistent with "cross threading" during assembly of the center housing and adaptor. [REDACTED] then, apparently, notified [REDACTED], the manufacturer of the module, on [REDACTED] 1990.

It is reported that [REDACTED] began an immediate investigation, but neither they, nor [REDACTED] could replicate the separation of the center post housing and adaptor, and no reports of field failure were reported to [REDACTED] or [REDACTED].

[REDACTED] reports that on [REDACTED] 1990 they test fired 11 inflators which had been returned from the field to assist in their investigation. [REDACTED] reported that these inflators were selected because each inflator had a torque reading, during assembly, of more than four standard deviations below the mean value for that inflator's production lot. According to [REDACTED], three of these inflators were found to have the same defect.

At approximately the same time, [REDACTED] 1990, [REDACTED] replicated the separation on three units during the laboratory deployments. Based on the torque characteristics of these units, [REDACTED] suspected that approximately 133 [REDACTED] airbag modules installed in various Ford vehicles could possibly have undetected thread damage. [REDACTED] notified NHTSA of the potential defect and initiated a recall of 1990 [REDACTED] vehicles that were equipped with driver's side supplemental restraint systems manufactured by [REDACTED]. [REDACTED] was apparently trying to identify those vehicles with [REDACTED] airbag modules manufactured between

██████████ 1989 and ██████████ 1990 and replace them at no charge to the owners.

The Ford recall (number 90515) was dated ██████████, 1990 and upon its receipt, the owner of Vehicle 1 (the case vehicle) took the vehicle to a local Ford dealer for inspection. This inspection revealed that the case vehicle was equipped with an airbag module with a ██████████ date of manufacture of the ██████████ day of 1989 (██████████ 1989), and that it was one of the possibly defective airbag modules.

According to several reports, the ██████████ dealer ordered a replacement airbag module. When the replacement was received a technician in the dealership removed the suspect module and placed it on his work bench immediately adjacent to the replacement module.

The technician then prepared the steering wheel to receive the replacement module. For unknown reasons, the technician picked up the suspect module and re-installed it in Vehicle 1 and returned the replacement module to ██████████ as a possibly defective airbag module. The case vehicle was then returned to the owner.

Scene Clearance: The driver of Vehicle 1 allegedly sustained moderate injuries consisting of burns to the left face, left eye, left hand, left arm, neck and chest; maximum AIS = AIS-1. She did not require extrication from the vehicle and she was transported to a local hospital where she was admitted for treatment. The right front and left rear seating position occupants were not injured in this accident and did not require medical treatment.

Police investigators reported that the driver of Vehicle 2 was not injured in this accident. This report could not be independently verified as the driver of Vehicle 2 refused to cooperate with the investigation due to pending litigation by the owner of Vehicle 1.

Both vehicles were towed from the scene due to damage sustained in this accident.

Safety Standards: There were no violations of ██████████ Standards and Regulations found during the inspection of the case vehicle.

Case Considerations:

It should be noted that the owner of Vehicle 1, as well as her attorney refused to cooperate in this investigation due to planned litigation in this matter.

DRIVER AND OTHER OCCUPANTS:

VEHICLE 1

	DRIVER	OCCUPANT 2
Age/Sex:	36 year old/Female	13 year old/Female
Seated Position:	Left Front	Right Front
Seat Type:	Bench with separate backs	Bench with separate backs
Height:	Refused	Refused
Weight:	Refused	Refused
Occupation:	Housewife	Student
Pre-existing Medical Condition:	None known	None known
Alcohol/Drug Involvement:	None	None
Driving Experience:	Refused	N/A
Body Posture:	Refused	Refused
Hand Position:	Refused	Refused
Foot Position:	Refused	Refused
Restraint Usage:	3-point manual lap/shoulder safety restraint	3-point manual lap/shoulder safety restraint
Additional Occupants:	2	1

DRIVER AND OTHER OCCUPANTS:

VEHICLE 1

	Occupant # 3
Age/Sex:	9 year old/Female
Seated Position:	Left Rear
Seat Type:	Bench
Height:	Refused
Weight:	Refused
Occupation:	Student
Pre-existing Medical Condition:	None known
Alcohol/Drug Involvement:	None
Driving Experience:	N/A
Body Posture:	Refused
Hand Position:	Refused
Foot Position:	Refused
Restraint Usage:	3-point manual lap/shoulder safety restraint
Additional Occupants:	None

DRIVER AND OTHER OCCUPANTS (con't):

VEHICLE 2

DRIVER

Age/Sex:	51 year old/Male
Seated Position:	Left front
Seat Type:	Refused
Height:	Refused
Weight:	Refused
Occupation:	Refused
Pre-existing Medical Condition:	None reported
Alcohol Involvement:	None
Driving Experience:	Refused
Body Posture:	Refused
Hand Position:	Refused
Foot Position:	Refused
Restraint Usage:	Refused
Additional Occupants:	None

Dynamic Science, Inc.
In-Depth Investigation
Case Number: DSI-93-AB-013

INJURIES:

Vehicle 1

	<u>INJURY</u>	<u>OIC CODE</u>	<u>ICD-9</u>	<u>SOURCE</u>
DRIVER:	Burns (NFS), left eye	7292000.1,2451300		airbag
	Burns (NFS), left face	7292000.1,2451300		airbag
	Burns (NFS), neck	7392000.1,9451300		airbag
	Burns (NFS), chest	7492000.1,9451300		airbag
	Burns (NFS), left arm	7792000.1,2451300		airbag
	Burns (NFS), left hand	7792000.1,2451300		airbag
R/F OCCUPANT:	Not injured			
L/F/ OCCUPANT:	Not injured			

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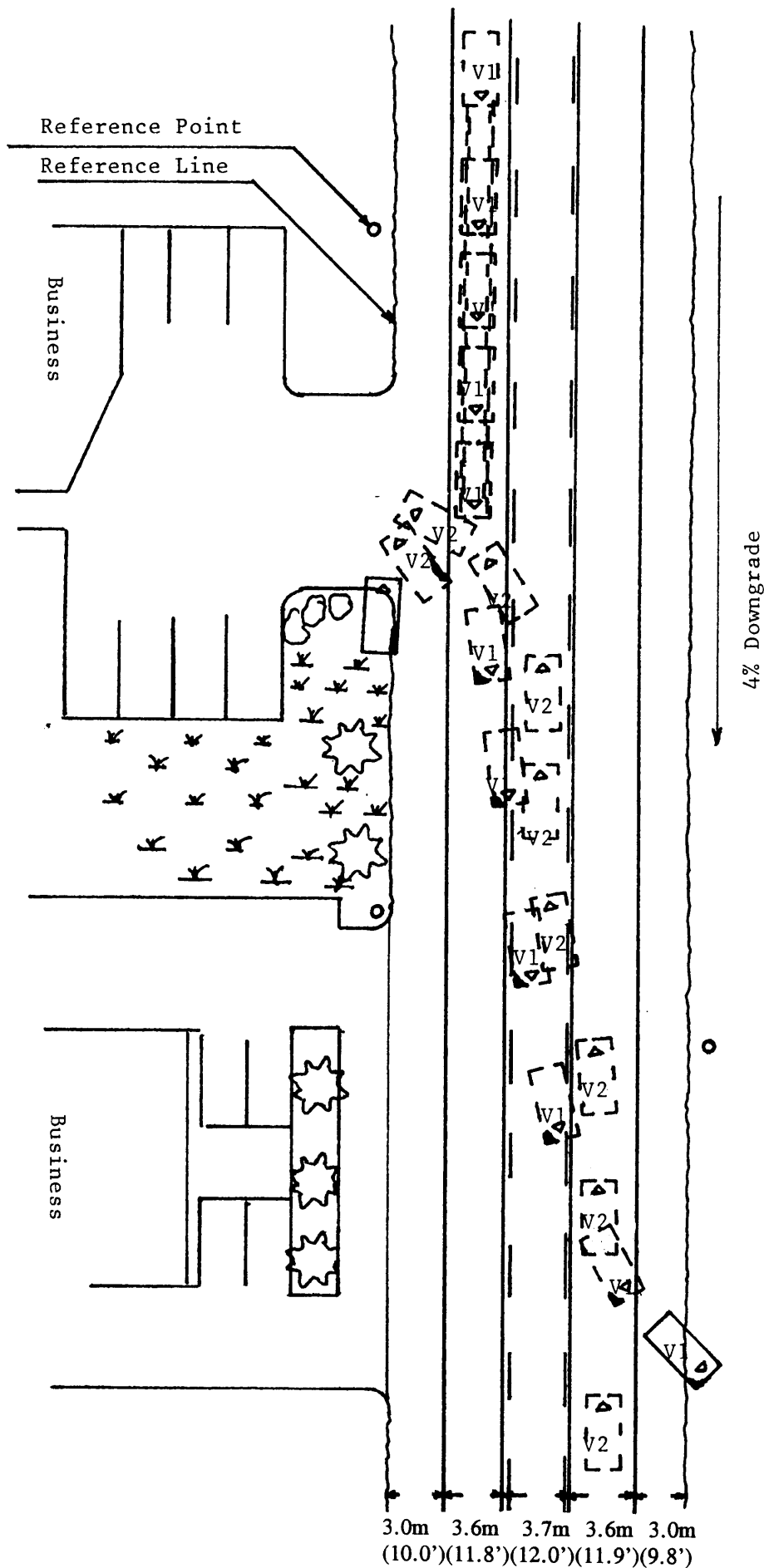
INJURIES:

Vehicle 2

	<u>INJURY</u>	<u>OIC CODE</u>	<u>ICD-9</u>	<u>SOURCE</u>
DRIVER:	Police reported no injury			

Abbreviations Used In Scene And Photographic Documentation

'	Feet
"	Inches
AIS	Abbreviated Injury Scale
BLF	Begin Left Front
BLR	Begin Left Rear
BRF	Begin Right Front
BRR	Begin Right Rear
CBE	Cab Behind Engine
CCW	Counterclockwise
CDC	Collision Deformation Classification
CG	Center of Gravity
CM	Centimeter
COE	Cab Over Engine
CW	Clockwise
E, EB	East, Eastbound
ELF	End Left Front
ELR	End Left Rear
ERF	End Right Front
ERR	End Right Rear
FRP	Final Rest Position
I	Interstate Highway
IP	Intermediate Point
KG	Kilogram
KPH	Kilometers Per Hour
LF	Left Front
LR	Left Rear
M	Meter
N, NB	North, Northbound
NE	Northeast
NW	Northwest
PDOF	Principal Direction of Force
POI	Point of Impact
R	Radius of Curvature
RF	Right Front
RL	Reference Line
RP	Reference Point
RR	Right Rear
S, SB	South, Southbound
SE	Southeast
SW	Southwest
T	Time or Elapsed Time (in seconds)
U.S.	United States Highway
V1	Vehicle Number 1
W, WB	West, Westbound



DYNAMIC SCIENCE
DSI-93-AB-013

1cm = 3.6m
1" = 30.0'



VEHICLES:

V1 = 1990 Ford Taurus
V2 = 1978 Mercedes Benz
450 SEL

COLLISION MEASUREMENTS

Case Number DSI-93-AB-013

Reference Point: Wood utility pole

Reference Line: Southwest edge of roadway

DATA POINT	LONGITUDINALS	LATERALS
Southwest edge roadway	0	0
Single, white line, southwest edge SE bound travel lane	0	3m (10 ft) NE
Yellow lines, southwest edge turn lane	0	6.6m (21.8 ft) NE
Yellow lines, northeast edge turn lane	0	10.3m (33.8 ft) NE
Single, white line, northeast edge NW bound travel lane	0	13.9m (45.7 ft) NE
Northeast edge of roadway	0	16.9m (55.5 ft) NE
Left front brake skid, Vehicle 1		
Start	7.1m (23.2 ft) NW	5.6m (18.3 ft) NE
End	15.5m (51 ft) SE	5.2m (17.1 ft) NE
Right front brake skid, Vehicle 1		
Start	7.3M (24 FT) NW	4.1m (13.4 ft) NE
End	15.5m (51 ft) SE	3.7m (12.2 ft) NE
POI	15.5m (51 ft) SE	4.6m (15.0 ft) NE
FRP, Vehicle 1	61.8m (202.6 ft) SE	17.2m (56.5 ft) NE
FRP, Vehicle 1	14.7M (48.1 FT) SE	2m (6.6 ft) SW

PHOTO INDEX

Case No. DSI-93-AB-013

PHOTO NO.	VEHICLE NO.	DIRECTION OF PICTURE	SUBJECT MATTER
1	Vehicle 1	north	Approach path, Vehicle 1
2-5	Vehicle 1	south	Travel path, Vehicle 1
6	Vehicle 1	south	POI
7	Vehicle 1	north	Reverse travel path, Vehicle 1
8-11	Vehicle 1	SE	Travel path, Vehicle 1, POI to FRP
12	Vehicle 1	SE	FRP, Vehicle 1
13	Vehicle 1	NW	Reverse travel path, Vehicle 1 from FRP to POI
14	Vehicle 2	south	Approach path, Vehicle 2
15-16	Vehicle 2	north	Travel path, Vehicle 2
17-18	Vehicle 2	north	POI and FRP, Vehicle 2
19	Vehicle 2	south	Reverse travel path, Vehicle 2
20-35	Vehicle 1	CCW	Exterior views, Vehicle 1
36-59	Vehicle 1	---	Interior views, Vehicle 1
60-64	Vehicle 1	Front	AB module flaps, Photos 4 and 5 - abraded by lower steering wheel rim
65-72	Vehicle 1	Front	AB burn holes. Photos 9 and 10 - left burn hole detail, Photos 11 and 13 - right burn hole detail
73-76	Vehicle 1	Left side	Airbag and module - bag tear and left rear exhaust vent
77-82	Vehicle 1	Right side	Airbag and module - bag tear and right rear exhaust vent
83-86	Vehicle 1	Interior	AB gas generator - initiator housing port
87-90	Vehicle 1	---	Initiator housing
91-93	Vehicle 1	Rear	AB gas generator and retainer
94	Vehicle 1	Rear	Top left bar code
95-96	Vehicle 1	Rear	Top right bar code















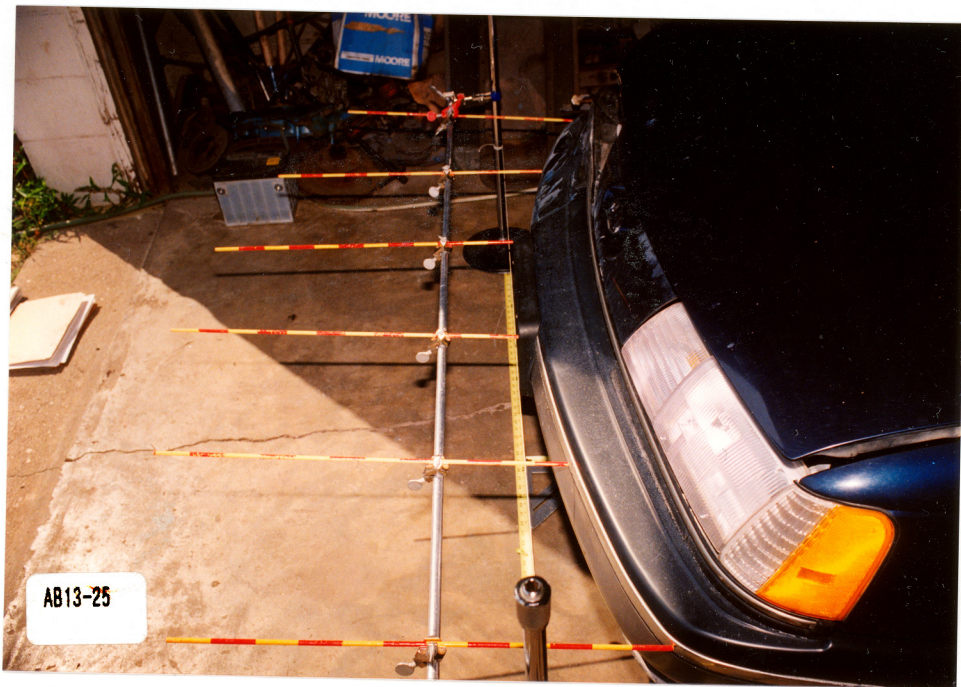






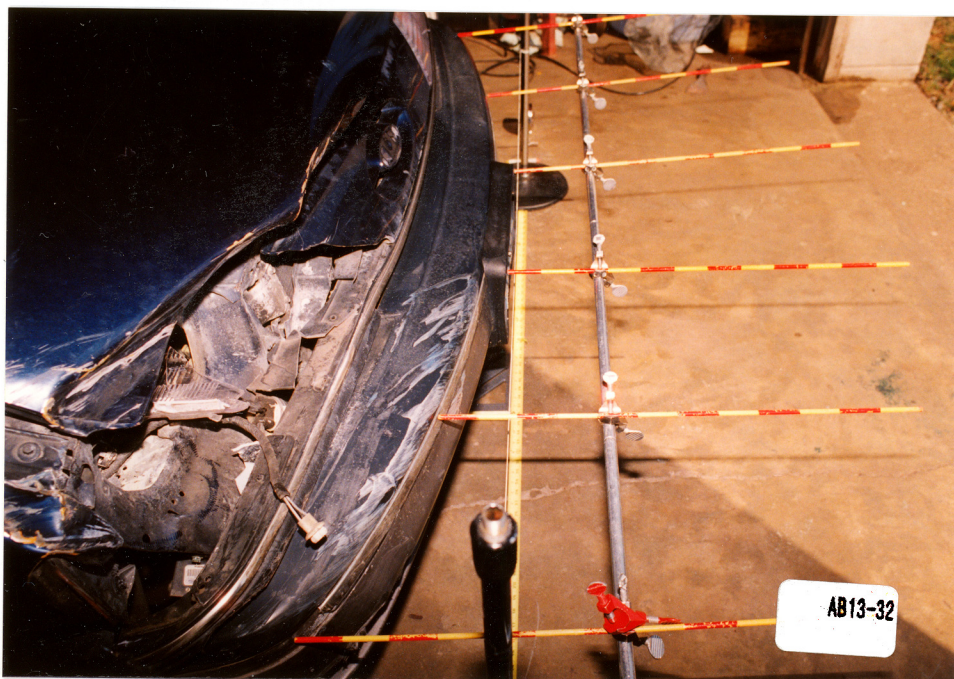




















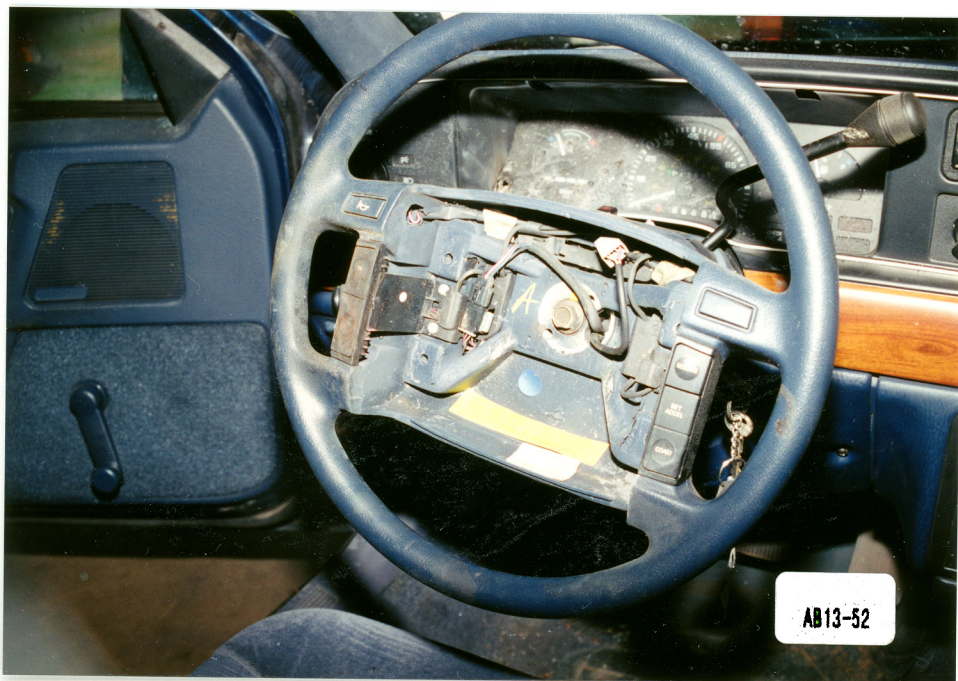




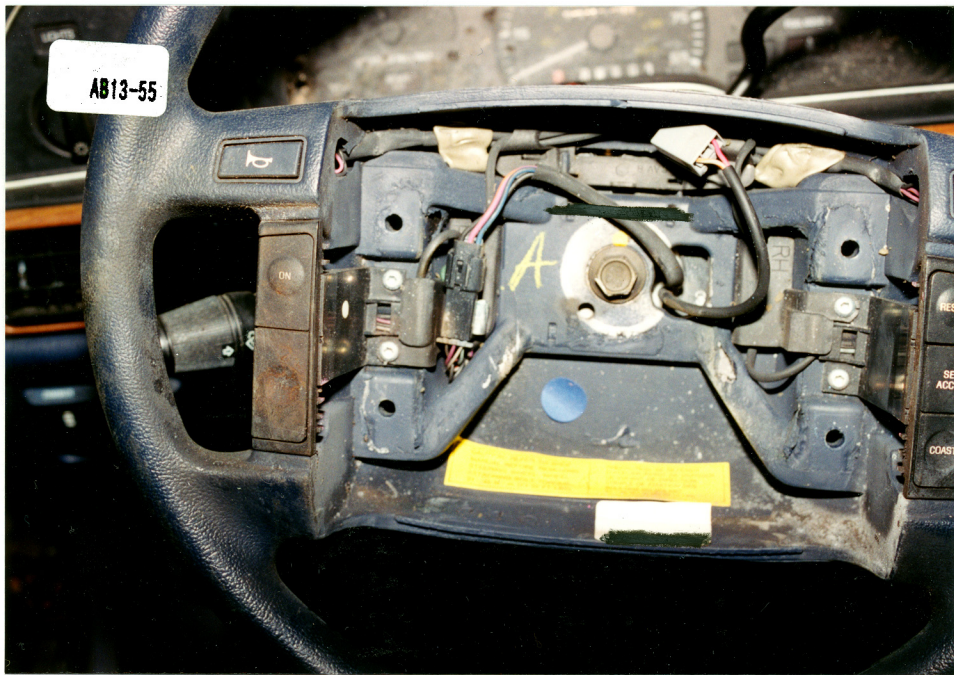








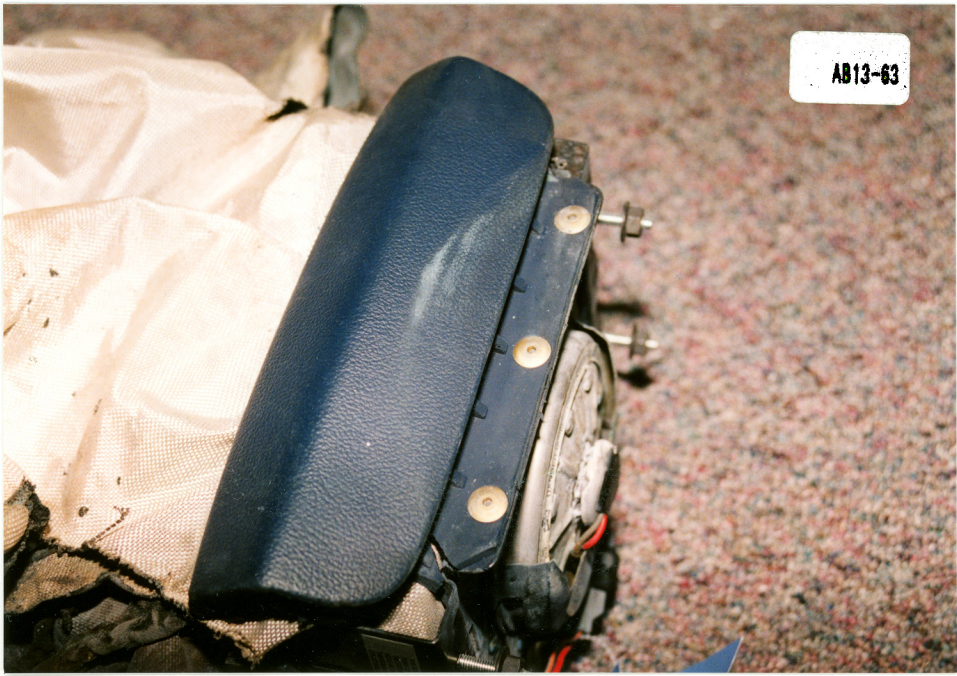






















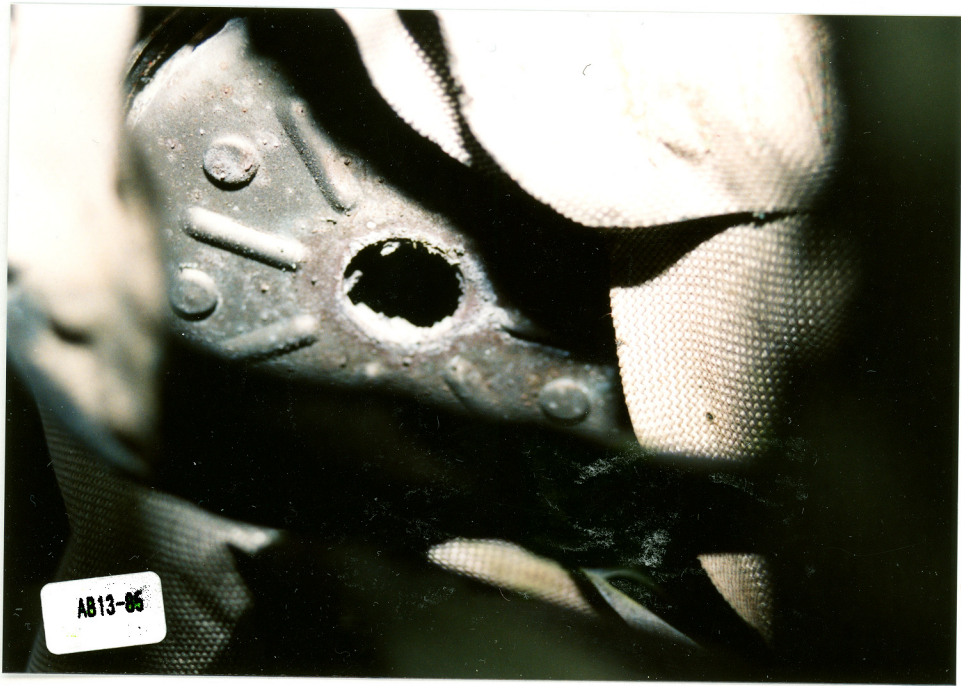




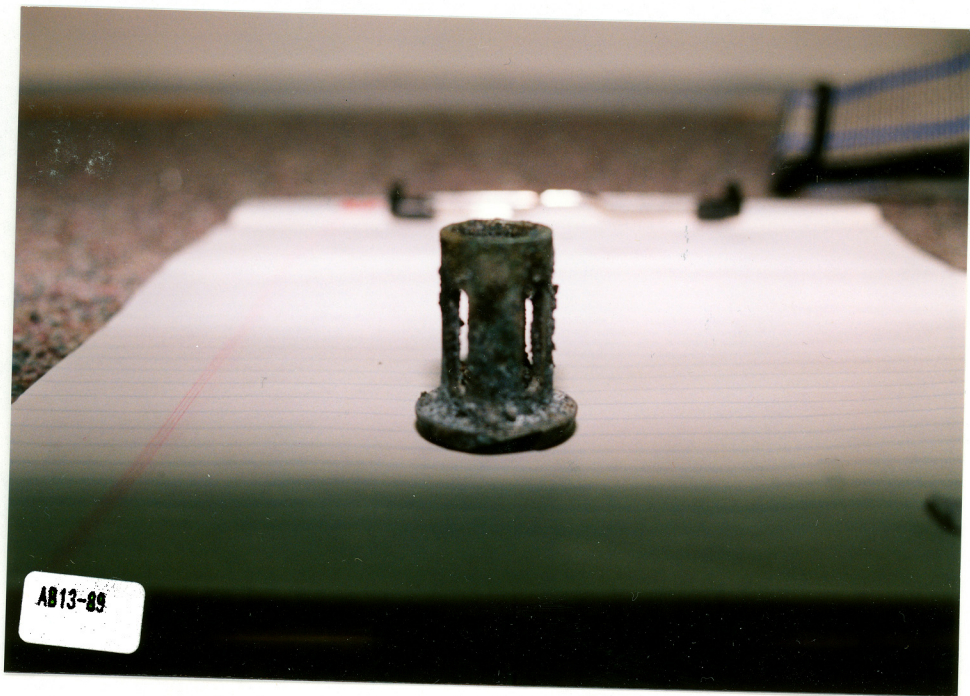


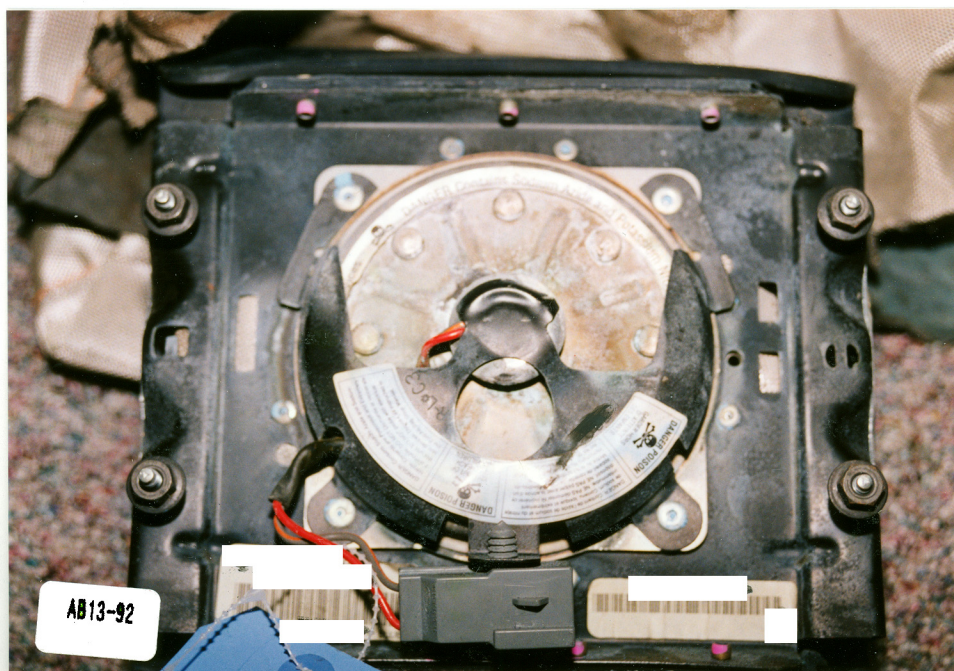


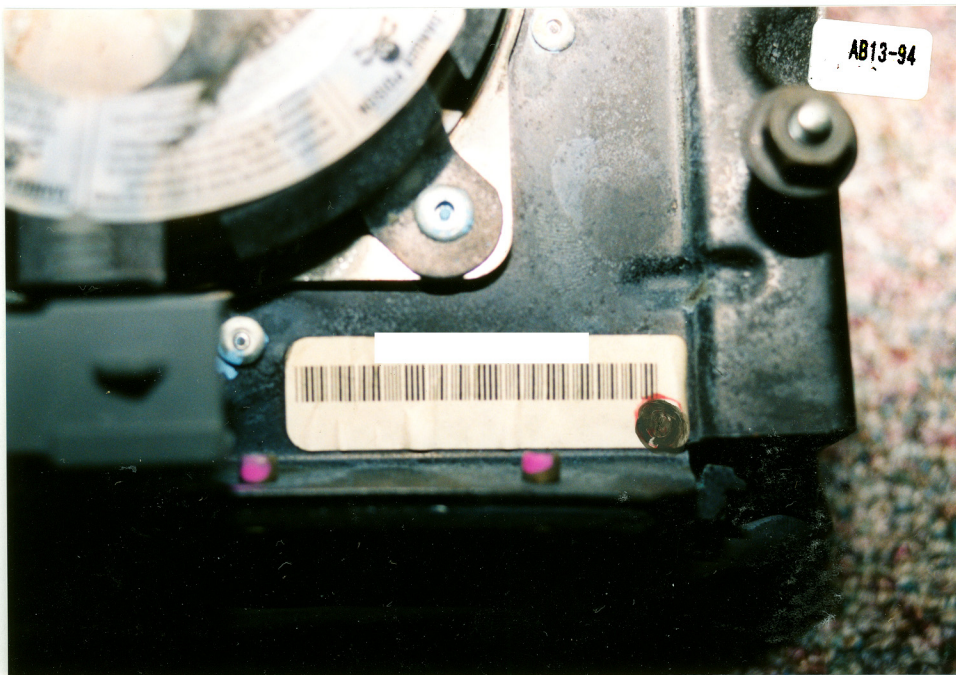
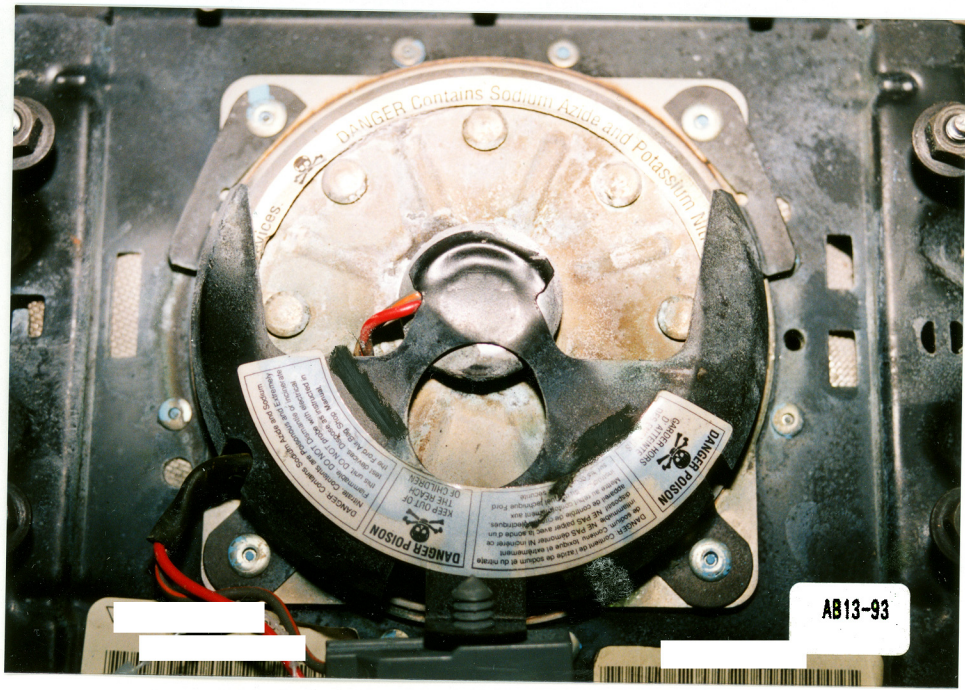


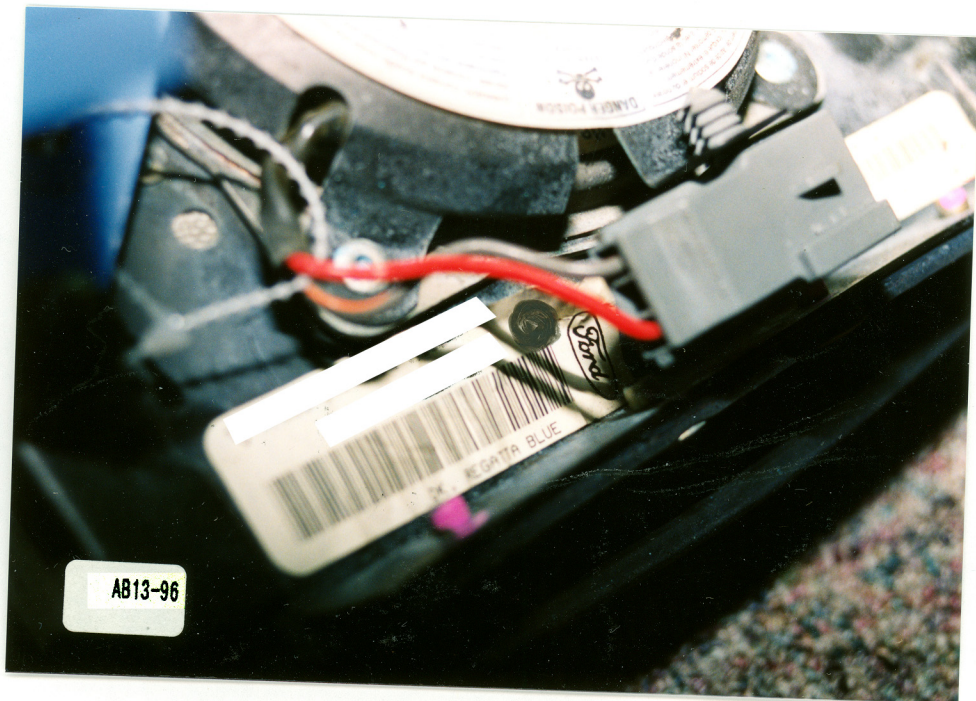
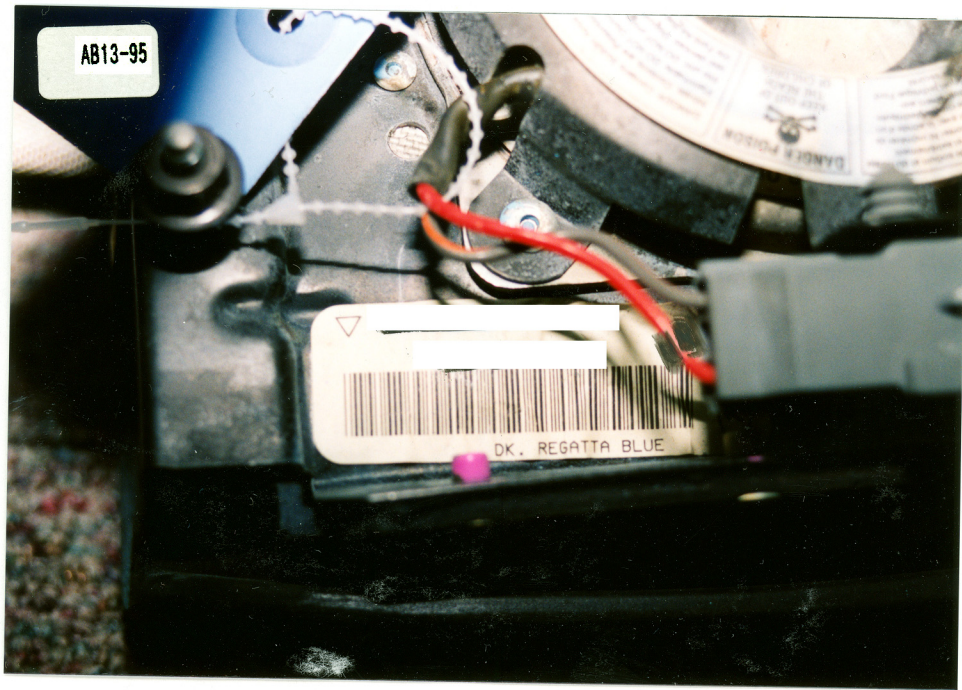














ACCIDENT FORM

NATIONAL ACCIDENT SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM

1. Primary Sampling Unit Number _____

2. Case Number - Stratum DSI-93-AB-013

IDENTIFICATION

3. Number of General Vehicle
Forms Submitted 02

4. Date of Accident
(Month, Day, Year) SUMMER / WEEKDAY / 9 3

5. Time of Accident AFTERNOON

Code reported military time of accident.

NOTE: Midnight = 2400
Unknown = 9999

SPECIAL STUDIES - INDICATORS

Check (✓) each special study (SS14-SS18 below) that has been completed; code 1 for the checked special studies and 0 for the special studies not checked.

6. 0 SS14 Fatal AOPS 0

7. 0 SS15 Administrative Use 0

8. 0 SS16 _____ 0

9. 0 SS17 _____ 0

10. 0 SS18 _____ 0

NUMBER OF EVENTS

11. Number of Recorded Events
in This Accident 01

Code the number of events which occurred
in this accident.

ACCIDENT EVENTS

For each event that occurred in the accident, code the lowest numbered vehicle in the left columns and the other involved vehicle or object on the right.

Accident Event Sequence Number	Vehicle Number	Class Of Vehicle	General Area of Damage	Vehicle Number or Object Contacted	Class Of Vehicle	General Area of Damage
12. <u>0 1</u>	13. <u>0 1</u>	14. <u>0 3</u>	15. <u>F</u>	16. <u>0 2</u>	17. <u>0 4</u>	18. <u>R</u>
19. <u>0 2</u>	20. _____	21. _____	22. _____	23. _____	24. _____	25. _____
26. <u>0 3</u>	27. _____	28. _____	29. _____	30. _____	31. _____	32. _____
33. <u>0 4</u>	34. _____	35. _____	36. _____	37. _____	38. _____	39. _____
40. <u>0 5</u>	41. _____	42. _____	43. _____	44. _____	45. _____	46. _____

IF GREATER THAN FIVE EVENTS, CONTINUE CODING ON THE ACCIDENT EVENT SUPPLEMENT

CODES FOR CLASS OF VEHICLE

- (00) Not a motor vehicle
- (01) Subcompact/mini (wheelbase < 254 cm)
- (02) Compact (wheelbase ≥ 254 but < 265 cm)
- (03) Intermediate (wheelbase ≥ 265 but < 278 cm)
- (04) Full size (wheelbase ≥ 278 but < 291 cm)
- (05) Largest (wheelbase ≥ 291 cm)
- (09) Unknown passenger car size
- (11) Compact utility vehicle
- (12) Large utility vehicle (≤ 4,500 kgs GVWR)
- (13) Passenger van (≤ 4,500 kgs GVWR)
- (14) Other van (≤ 4,500 kgs GVWR)
- (15) Pickup truck (≤ 4,500 kgs GVWR)
- (18) Other truck (≤ 4,500 kgs GVWR)
- (19) Unknown light truck type
- (20) School bus
- (21) Other bus
- (22) Truck (> 4,500 kgs GVWR)
- (23) Tractor without trailer
- (24) Tractor-trailer(s)
- (25) Motored cycle
- (28) Other vehicle
- (99) Unknown

CODES FOR GENERAL AREA OF DAMAGE (GAD)

CDS APPLICABLE AND OTHER VEHICLES

- (O) Not a motor vehicle
- (N) Noncollision
- (F) Front
- (R) Right side
- (L) Left side
- (B) Back
- (T) Top
- (U) Undercarriage
- (9) Unknown

TDC APPLICABLE VEHICLES

- (O) Not a motor vehicle
- (N) Noncollision
- (F) Front
- (R) Right side
- (L) Left side
- (B) Back of unit with cargo
area (rear of trailer or
straight truck)
- (D) Back (rear of tractor)
- (C) Rear of cab
- (V) Front of cargo area
- (T) Top
- (U) Undercarriage
- (9) Unknown

CODES FOR VEHICLE NUMBER OR OBJECT CONTACTED

(01-30) — Vehicle Number

Noncollision

- (31) Overturn — rollover
- (32) Fire or explosion
- (33) Jackknife
- (34) Other intraunit damage (specify): _____

(35) Noncollision injury

(38) Other noncollision (specify): _____

(39) Noncollision — details unknown

Collision With Fixed Object

- (41) Tree (≤ 10 cm in diameter)
- (42) Tree (> 10 cm in diameter)
- (43) Shrubbery or bush
- (44) Embankment

(45) Breakaway pole or post (any diameter)

Nonbreakaway Pole or Post

- (50) Pole or post (≤ 10 cm in diameter)
- (51) Pole or post (> 10 cm but ≤ 30 cm in
diameter)
- (52) Pole or post (> 30 cm in diameter)
- (53) Pole or post (diameter unknown)

(54) Concrete traffic barrier

(55) Impact attenuator

(56) Other traffic barrier (includes guardrail)
(specify): _____

- (57) Fence
- (58) Wall
- (59) Building
- (60) Ditch or culvert
- (61) Ground
- (62) Fire hydrant
- (63) Curb
- (64) Bridge
- (68) Other fixed object (specify): _____

(69) Unknown fixed object

Collision with Nonfixed Object

- (71) Motor vehicle not in-transport
- (72) Pedestrian
- (73) Cyclist or cycle
- (74) Other nonmotorist or conveyance

(75) Vehicle occupant

(76) Animal

(77) Train

(78) Trailer, disconnected in transport

(88) Other nonfixed object (specify): _____

(89) Unknown nonfixed object

(98) Other event (specify): _____

(99) Unknown event or object

ACCIDENT EVENTS SUPPLEMENT

1. Primary Sampling Unit Number _____

2. Case Number—Stratum _____

Accident Event Sequence Number	Vehicle Number	Class Of Vehicle	General Area of Damage	Vehicle Number or Object Contacted	Class Of Vehicle	General Area of Damage
47. <u>0</u> <u>6</u>	48. _____	49. _____	50. _____	51. _____	52. _____	53. _____
54. <u>0</u> <u>7</u>	55. _____	56. _____	57. _____	58. _____	59. _____	60. _____
61. <u>0</u> <u>8</u>	62. _____	63. _____	64. _____	65. _____	66. _____	67. _____
68. <u>0</u> <u>9</u>	69. _____	70. _____	71. _____	72. _____	73. _____	74. _____
75. <u>1</u> <u>0</u>	76. _____	77. _____	78. _____	79. _____	80. _____	81. _____
82. <u>1</u> <u>1</u>	83. _____	84. _____	85. _____	86. _____	87. _____	88. _____
89. <u>1</u> <u>2</u>	90. _____	91. _____	92. _____	93. _____	94. _____	95. _____
96. <u>1</u> <u>3</u>	97. _____	98. _____	99. _____	100. _____	101. _____	102. _____
103. <u>1</u> <u>4</u>	104. _____	105. _____	106. _____	107. _____	108. _____	109. _____
110. <u>1</u> <u>5</u>	111. _____	112. _____	113. _____	114. _____	115. _____	116. _____
117. <u>1</u> <u>6</u>	118. _____	119. _____	120. _____	121. _____	122. _____	123. _____
124. <u>1</u> <u>7</u>	125. _____	126. _____	127. _____	128. _____	129. _____	130. _____
131. <u>1</u> <u>8</u>	132. _____	133. _____	134. _____	135. _____	136. _____	137. _____
138. <u>1</u> <u>9</u>	139. _____	140. _____	141. _____	142. _____	143. _____	144. _____
145. <u>2</u> <u>0</u>	146. _____	147. _____	148. _____	149. _____	150. _____	151. _____



GENERAL VEHICLE FORM

1. Primary Sampling Unit Number _____

2. Case Number - Stratum DSI-93-AB-013

3. Vehicle Number 01

VEHICLE IDENTIFICATION

4. Vehicle Model Year 90
Code the last two digits of the model year
(99) Unknown

5. Vehicle Make (specify): FORD
Applicable codes are found in your
NASS Data Collection, Coding and
Editing Manual.
(99) Unknown

6. Vehicle Model (specify): TAURUS L
Applicable codes are found in your
NASS Data Collection, Coding and
Editing Manual.
(999) Unknown

7. Body Type 4
Note: Applicable codes may be found on
the back of this page.

8. Vehicle Identification Number
1FACP5045LA * * * * *
Left justify; Slash zeros and letter Z (0 and Z)
No VIN—Code all zeros
Unknown—Code all nine's

OFFICIAL RECORDS

9. Police Reported Vehicle Disposition 1
(0) Not towed due to vehicle damage
(1) Towed due to vehicle damage
(9) Unknown

10. Police Reported Travel Speed 999
Code to the nearest kph (NOTE: 000 means
less than 0.5 kph)
(160) 159.5 kph and above
(999) Unknown
____ mph X 1.6093 = ____ kph

11. Police Reported Alcohol Presence 0
(0) No alcohol present
(1) Yes (alcohol present)
(7) Not reported
(8) No driver present
(9) Unknown

Note: See variables 37 through 55
(Page 4) for information on Other Drugs

12. Alcohol Test Result For Driver 96
Code actual value (decimal implied
before first digit—0.xx)
(95) Test refused
(96) None given
(97) AC test performed, results unknown
(98) No driver present
(99) Unknown

Source: PAR

ACCIDENT RELATED

13. Speed Limit 89
(000) No statutory limit
Code posted or statutory speed limit
in kph
(999) Unknown

55 mph X 1.6093 = 89 kph

14. Attempted Avoidance Maneuver 3
(00) No impact
(01) No avoidance actions
(02) Braking (no lockup)
(03) Braking (lockup)
(04) Braking (lockup unknown)
(05) Releasing brakes
(06) Steering left
(07) Steering right
(08) Braking and steering left
(09) Braking and steering right
(10) Accelerating
(11) Accelerating and steering left
(12) Accelerating and steering right
(97) No driver present
(98) Other action (specify):
(99) Unknown

15. Accident Type 69
Applicable codes may be found on the
back of page two of this field form
(00) No impact
Code the number of the diagram that
best describes the accident circumstance
(98) Other accident type (specify):
(99) Unknown

**** SKIP TO VARIABLE GV37 IF GV07 DOES NOT EQUAL 01-49 ****

CODES FOR BODY TYPE

BEST AVAILABLE COPY

CDS APPLICABLE VEHICLES

Automobiles

- (01) Convertible (excludes sun-roof, t-bar)
- (02) 2-door sedan, hardtop, coupe
- (03) 3-door/2-door hatchback
- (04) 4-door sedan, hardtop
- (05) 5-door/4-door hatchback
- (06) Station wagon (excluding van and truck based)
- (07) Hatchback, number of doors unknown
- (08) Other automobile type (specify): _____
- (09) Unknown automobile type

Automobile Derivatives

- (10) Auto based pickup (includes El Camino, Caballero, Ranchero, Brat, and Rabbit pickup)
- (11) Auto based panel (cargo station wagon, auto based ambulance/hearse)
- (12) Large limousine - more than four side doors or stretched chassis
- (13) Three-wheel automobile or automobile derivative

Utility Vehicles ($\leq 4,500$ kgs GVWR)

- (14) Compact utility (Jeep CJ-2 - CJ-7, Scrambler, Golden Eagle, Renegade, Laredo, Wrangler, Cherokee [84 and after], Dispatcher, Raider, Bronco II, Bronco [78 and before], Explorer, S-10 Blazer, Geo Tracker, Bravada, S-15 Jimmy, Thing, Pathfinder, Trooper, Trooper II, Rodeo, Amigo, Navajo, 4-Runner, Montero, Samurai, Sidekick, Rocky)
- (15) Large utility (includes Jeep Cherokee [83 and before], Ramcharger, Trailduster, Bronco-fullsize [78 and after], fullsize Blazer, fullsize Jimmy, Landcruiser, Rover, Scout)
- (16) Utility station wagon (Chevy Suburban, GMC Suburban, Travelall, Grand Wagoneer, includes suburban limousine)
- (19) Utility, unknown body type

Van Based Light Trucks ($\leq 4,500$ kgs GVWR)

- (20) Minivan (Chrysler Town and Country, Caravan, Grand Caravan, Voyager, Grand Voyager, Mini-Ram, Dodge/Plymouth Vista, Aerostar, Villager, Lumina APV, Trans Sport, Silhouette, Astro, Safari, Toyota Van, Toyota Minivan, Previa, Nissan Minivan, Quest, Mitsubishi Minivan, Vanagon/Camper.)
- (21) Large van (B150-B350, Sportsman, Royal, Maxiwagon, Ram, Tradesman, Voyager [83 and before], E150-E350, Econoline, Clubwagon, Chateau, G10-G30, Chevy Van, Beauville, Sport Van, G15-G35, Rally Van, Vandura.)
- (22) Step van or walk-in van ($\leq 4,500$ kgs GVWR)
- (23) Van based motorhome ($\leq 4,500$ kgs GVWR)
- (24) Van based school bus ($\leq 4,500$ kgs GVWR)
- (25) Van based other bus ($\leq 4,500$ kgs GVWR)
- (28) Other van type (Hi-Cube Van, Kary) (specify): _____
- (29) Unknown van type

Light Conventional Trucks (Pickup style cab, $\leq 4,500$ kgs GVWR)

- (30) Compact pickup (D50, Colt P/U, Ram 50, Dakota, Arrow Pickup [foreign], Ranger, Courier, S-10, T-10, LUV, S-15, T-15, Sonoma, Datsun/Nissan Pickup, P'up, Mazda Pickup, Toyota Pickup, Mitsubishi Pickup)
- (31) Large Pickup (Jeep Pickup, Comanche, Ram Pickup, D100-D350, W100-W350, F100-F350, C10-C35, K10-K35, R10-R35, V10-V35, Silverado, Sierra, R100-R500,)

- (32) Pickup with slide-in camper
- (33) Convertible pickup
- (39) Unknown pickup style light conventional truck type

Other Light Trucks ($\leq 4,500$ kgs GVWR)

- (40) Cab chassis based (includes rescue vehicles, light stake, dump, and tow truck)
- (41) Truck based panel
- (42) Light truck based motorhome (chassis mounted)
- (45) Other light conventional truck type
- (48) Unknown light truck type
- (49) Unknown light vehicle type (automobile, utility, van, or light truck)

OTHER VEHICLES

Buses (Excludes Van Based)

- (50) School bus (designed to carry students, not cross country or transit)
- (58) Other bus type (e.g., transit, intercity, bus based motorhome) (specify): _____
- (59) Unknown bus type

Medium/Heavy Trucks ($> 4,500$ kgs GVWR)

- (60) Step van ($> 4,500$ kgs GVWR)
- (61) Single unit straight truck (4,500 kgs $<$ GVWR \leq 8,850 kgs)
- (62) Single unit straight truck (8,850 kgs $<$ GVWR \leq 12,000 kgs)
- (63) Single unit straight truck ($> 12,000$ kgs GVWR)
- (64) Single unit straight truck, GVWR unknown
- (65) Medium/heavy truck based motorhome
- (67) Truck-tractor with no cargo trailer
- (68) Truck-tractor pulling one trailer
- (69) Truck-tractor pulling two or more trailers
- (70) Truck-tractor (unknown if pulling trailer)
- (78) Unknown medium/heavy truck type
- (79) Unknown truck type (light/medium/heavy)

Motored Cycles (Does Not Include All-Terrain Vehicles/Cycles)

- (80) Motorcycle
- (81) Moped (motorized bicycle)
- (82) Three-wheel motorcycle or moped
- (88) Other motored cycle (minibike, motorscooter) (specify): _____
- (89) Unknown motored cycle type

Other Vehicles

- (90) ATV (All-Terrain Vehicle) and ATC (All-Terrain Cycle)
- (91) Snowmobile
- (92) Farm equipment other than trucks
- (93) Construction equipment other than trucks
- (97) Other vehicle type
- (99) Unknown body type

OCCUPANT RELATED

16. Driver Presence in Vehicle 1
 (0) Driver not present
 (1) Driver present
 (9) Unknown
17. Number of Occupants This Vehicle φ 3
 (00-96) Code actual number of occupants for this vehicle
 (97) 97 or more
 (99) Unknown
18. Number of Occupant Forms Submitted φ 3

VEHICLE WEIGHT ITEMS

19. Vehicle Curb Weight 1 3 4 0
 Code weight to nearest 10 kilograms.
 (045) Less than 450 kilograms
 (610) 6,100 kilograms or more
 (999) Unknown
φ 2,956 lbs X .4536 = 1,341 kgs
 Source: _____
20. Vehicle Cargo Weight φ, φ, φ 0
 Code weight to nearest 10 kilograms.
 (000) Less than 5 kilograms
 (450) 4,500 kilograms or more
 (999) Unknown
 _____ lbs X .4536 = _____ kgs

RECONSTRUCTION DATA

21. Towed Trailing Unit φ
 (0) No towed unit
 (1) Yes—towed trailing unit
 (9) Unknown
22. Documentation of Trajectory Data for This Vehicle φ
 (0) No
 (1) Yes
23. Post Collision Condition of Tree or Pole (For Highest Delta V) φ
 (0) Not collision (for highest delta V) with tree or pole
 (1) Not damaged
 (2) Cracked/sheared
 (3) Tilted <45 degrees
 (4) Tilted ≥45 degrees
 (5) Uprooted tree
 (6) Separated pole from base
 (7) Pole replaced
 (8) Other (specify): _____
 (9) Unknown







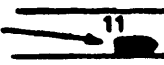


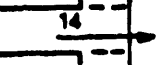

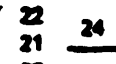





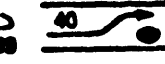

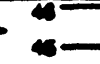

















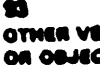
24. Rollover φ
 (0) No rollover (no overturning)
Rollover (primarily about the longitudinal axis)
 (1) Rollover, 1 quarter turn only
 (2) Rollover, 2 quarter turns
 (3) Rollover, 3 quarter turns
 (4) Rollover, 4 or more quarter turns (specify): _____
 (5) Rollover--end-over-end (i.e., primarily about the lateral axis)
 (9) Rollover (overturn), details unknown

OVERRIDE/UNDERRIDE (THIS VEHICLE)

25. Front Override/Underride (this Vehicle) φ
26. Rear Override/Underride (this Vehicle) φ
 (0) No override/underride, or not an end-to-end impact
Override (see specific CDC)
 (1) 1st CDC
 (2) 2nd CDC
 (3) Other not automated CDC (specify): _____
Underride (see specific CDC)
 (4) 1st CDC
 (5) 2nd CDC
 (6) Other not automated CDC (specify): _____
 (7) Medium/heavy truck or bus override
 (9) Unknown

HEADING ANGLE AT IMPACT FOR HIGHEST DELTA V

- Values: (000)-(359) Code actual value
 (997) Noncollision
 (998) Impact with object
 (999) Unknown
27. Heading Angle For This Vehicle 1 3 5
28. Heading Angle For Other Vehicle 2 6 φ

Category	Configuration	ACCIDENT TYPES (Includes Intent)					
I Single Driver	A Right Roadside Departure	 01 DRIVE OFF ROAD	 02 CONTROL/ TRACTION LOSS	 03 AVOID COLLISION WITH VEH.. PED.. ANIM.	04 SPECIFICS OTHER	05 SPECIFICS UNKNOWN	
	B Left Roadside Departure	 06 DRIVE OFF ROAD	 07 CONTROL/ TRACTION LOSS	 08 AVOID COLLISION WITH VEH.. PED.. ANIM.	09 SPECIFICS OTHER	10 SPECIFICS UNKNOWN	
	C Forward Impact	 11 PARKED VEH.	 12 STA. OBJECT	 13 PEDESTRIAN/ ANIMAL	 14 END DEPARTURE	15 SPECIFICS OTHER	16 SPECIFICS UNKNOWN
II Same Trafficway Same Direction	D Rear-End	 20 STOPPED 21, 22, 23	 22 SLOWER 24, 25, 27	 24 DECEL. 26, 28, 31	 26 AVOID COLLISION WITH VEH.	(EACH • 32) SPECIFICS OTHER	(EACH • 33) SPECIFICS UNKNOWN
	E Forward Impact	 34 CONTROL/ TRACTION LOSS	 36 CONTROL/ TRACTION LOSS	 38 AVOID COLLISION WITH VEH.	 40 AVOID COLLISION WITH OBJECT	(EACH • 42) SPECIFICS OTHER	(EACH • 43) SPECIFICS UNKNOWN
	F Sideswipe Angle	 44 LATERAL MOVE	 46 LATERAL MOVE	 48 LATERAL MOVE	(EACH • 48) SPECIFICS OTHER	(EACH • 49) SPECIFICS UNKNOWN	
III Same Trafficway Opposite Direction	G Head-On	 50 LATERAL MOVE	(EACH • 52) SPECIFICS OTHER	(EACH • 53) SPECIFICS UNKNOWN			
	H Forward Impact	 54 CONTROL/ TRACTION LOSS	 56 CONTROL/ TRACTION LOSS	 58 AVOID COLLISION WITH VEH.	 60 AVOID COLLISION WITH OBJECT	(EACH • 62) SPECIFICS OTHER	(EACH • 63) SPECIFICS UNKNOWN
	I Sideswipe Angle	 64 LATERAL MOVE	(EACH • 66) SPECIFICS OTHER	(EACH • 67) SPECIFICS UNKNOWN			
IV Change Trafficway Vehicle Turning	J Turn Across Path	 68 INITIAL OPPOSITE DIRECTIONS	 70 INITIAL SAME DIRECTIONS	 72 INITIAL SAME DIRECTIONS	(EACH • 74) SPECIFICS OTHER	(EACH • 75) SPECIFICS UNKNOWN	
	K Turn Into Path	 76 TURN INTO SAME DIRECTION	 78 TURN INTO SAME DIRECTION	 80 TURN INTO OPPOSITE DIRECTIONS	 82 TURN INTO OPPOSITE DIRECTIONS	(EACH • 84) SPECIFICS OTHER	(EACH • 85) SPECIFICS UNKNOWN
V Intersecting Paths (Vehicle Damage)	L Straight Paths	 87	 89	(EACH • 90) SPECIFICS OTHER	(EACH • 91) SPECIFICS UNKNOWN		
VI Miscellaneous	M Backing Etc.	 92 BACKING VEH.	 93 OTHER VEH. OR OBJECT	98 Other Accident Type 99 Unknown Accident Type 00 No Impact			

29. Basis for Total Delta V (highest)

3*Delta V Calculated*

- (1) CRASH program—damage only routine
- (2) CRASH program—damage and trajectory routine
- (3) Missing vehicle algorithm

Delta V Not Calculated

- (4) At least one vehicle (which may be this vehicle) is beyond the scope of an acceptable reconstruction program, regardless of collision conditions.
- (5) All vehicles within scope (CDC applicable) of CRASH program but one of the collision conditions is beyond the scope of the CRASH program or other acceptable reconstruction technique, regardless of adequacy of damage data.
- (6) All vehicle and collision conditions are within scope of one of the acceptable reconstruction programs, but there is insufficient data available.

COMPUTER GENERATED DELTA V

30. Total Delta V

Secondary Highest

0 1 0
(46 mph)9.58 Nearest kph(5.95 mph)

(NOTE: 000 means less than
0.5 kph)
(160) 159.5 kph and above
(999) Unknown

31. Longitudinal Component of Delta V

+
0 0 1 0-9.58 Nearest kph(-5.95 mph)

(NOTE: 000 means greater than
-0.5 kph and less than +0.5 kph)
(±160) ±159.5 kph and above
(999) Unknown

Secondary

Highest

32. Lateral Component of Delta V

+

0 Nearest kph

(NOTE: 000 means greater than
-0.5 kph and less than +0.5 kph)
(±160) ±159.5 kph and above
(999) Unknown

33. Energy Absorption

0 0 7 2 0 07206 Nearest 100 joules(5314.9 ft-lbs)(5306 ft-lbs)

(NOTE: 0000 means less than 50 joules)
(9997) 999,650 joules or more
(9999) Unknown

34. Confidence In Reconstruction Program Results (For Highest Delta V)

- (0) No reconstruction
- (1) Collision fits model — results appear reasonable
- (2) Collision fits model — results appear high
- (3) Collision fits model — results appear low
- (4) Borderline reconstruction — results appear reasonable

35. Type of Vehicle Inspection

- (0) No inspection
- (1) Complete inspection
- (2) Partial inspection (specify):

36. Is this an AOPS Vehicle?

- (0) No
- (1) Yes - researcher determined
- (2) VIN determined air bag system
- (3) VIN determined automatic (passive) belts
- (4) VIN determined air bag and automatic (passive) belts

IS OLDMISS APPLICABLE FOR THIS VEHICLE? [☒] YES [] NOIF YES: IS A COMPLETED OLDMISS PROGRAM SUMMARY INCLUDED? [☒] YES [] NO

37. Police Reported Other Drug Presence Ø

- (0) No other drugs present
- (1) Yes (other drug present)
- (7) Not reported
- (8) No driver present
- (9) Unknown

38. Police Reported Drug Evaluation Classification Ø

(DEC) Test For Driver

- (0) No DEC process available or given
- (1) DEC process given, results known
- (2) DEC process given, results unknown
- (3) DEC process available, unknown if given
- (8) No driver present

39. Other Drug Specimen Test Type For Driver Ø

- (0) No specimen test given
- (1) Blood test
- (2) Urine test
- (3) Other specimen tests (specify): _____
- (7) Unspecified specimen test
- (8) No driver present
- (9) Unknown if specimen test given

DRUG EVALUATION CLASSIFICATION

OTHER DRUGS TEST RESULTS FOR DRIVER

	DEC Test Results	Specimen Test Results
Narcotic Drug	40. <u>Ø</u>	41. <u>Ø</u>
Depressant Drug	42. <u>Ø</u>	43. <u>Ø</u>
Stimulant Drug	44. <u>Ø</u>	45. <u>Ø</u>
Hallucinogen Drug	46. <u>Ø</u>	47. <u>Ø</u>
Cannabinoid Drug	48. <u>Ø</u>	49. <u>Ø</u>
Phencyclidine (PCP)	50. <u>Ø</u>	51. <u>Ø</u>
Inhalant Drug	52. <u>Ø</u>	53. <u>Ø</u>
Other Drug (Excluding Nicotine, Aspirin, Alcohol, Drugs Administered Post-Crash)	54. <u>Ø</u>	55. <u>Ø</u>

Codes For DEC Test Results

- (0) No DEC test given
- (1) Passed DEC test
- (2) Failed DEC test
- (3) DEC test given—results unknown
- (8) No driver present
- (9) Unknown if DEC test given

Codes for Specimen Test Results

- (0) No specimen test given
- (1) Drug not found in specimen
- (2) Drug found in specimen
- (7) Specimen test given, results unknown or not obtained
- (8) No driver present
- (9) Unknown if specimen test given

OTHER DATA**56. Driver's Zip Code**

- (00000) Driver not present
 (00001) Driver not a resident of U.S. or territories
 _____ Code actual 5-digit zip code
 (99999) Unknown

57. Driver's Race/Ethnic Origin

- (0) Driver not present
 (1) White (non-Hispanic)
 (2) Black (non-Hispanic)
 (3) White (Hispanic)
 (4) Black (Hispanic)
 (5) American Indian, Eskimo or Aleut
 (6) Asian or Pacific Islander
 (8) Other (specify): _____

(9) Unknown

58. Vehicle Special Use (This Trip)

- (0) No special use
 (1) Taxi
 (2) Vehicle used as school bus
 (3) Vehicle used as other bus
 (4) Military
 (5) Police
 (6) Ambulance
 (7) Fire truck or car
 (8) Other (specify): _____
 (9) Unknown

ROLLOVER DATA

If GV07 (Body Type) \neq 1-49, leave GV59-GV63 blank.
 If GV24 (Rollover) = 0, then GV59-GV63 must equal 0.
 If GV24 = 9, then GV59-GV63 must equal 9.

59. Rollover Initiation Type

- (0) No rollover
 (1) Trip-over
 (2) Flip-over
 (3) Turn-over
 (4) Climb-over
 (5) Fall-over
 (6) Bounce-over
 (7) Collision with another vehicle
 (8) Other rollover initiation type specify): _____
 (9) Unknown rollover initiation type

60. Location of Rollover Initiation

- (0) No rollover
 (1) On roadway
 (2) On shoulder—paved
 (3) On shoulder—unpaved
 (4) On roadside or divided trafficway median
 (9) Unknown

61. Rollover Initiation Object Contacted**62. Location on Vehicle Where Initial Principal Tripping Force Is Applied**

- (0) No rollover
 (1) Wheels/tires
 (2) Side plane
 (3) End plane
 (4) Undercarriage
 (5) Other location on vehicle (specify): _____
 (8) Non-contact rollover forces (specify): _____
 (9) Unknown

63. Direction of Initial Roll

- (0) No rollover
 (1) Roll right - primarily about the longitudinal axis
 (2) Roll left - primarily about the longitudinal axis
 (5) End-over-end (i.e., primarily about the lateral axis)
 (9) Unknown roll direction

PRECRASH DATA**64. Pre-Event Movement (Prior to Recognition of Critical Event)**

- (01) Going straight
 (02) Slowing or stopping in traffic lane
 (03) Starting in traffic lane
 (04) Stopped in traffic lane
 (05) Passing or overtaking another vehicle
 (06) Disabled or parked in travel lane
 (07) Leaving a parking position
 (08) Entering a parking position
 (09) Turning right
 (10) Turning left
 (11) Making a U-turn
 (12) Backing up (other than for parking position)
 (13) Negotiating a curve
 (14) Changing lanes
 (15) Merging
 (16) Successful avoidance maneuver to a previous critical event
 (97) Other (specify): _____
 (98) No driver present
 (99) Unknown

CODES FOR ROLLOVER INITIATION OBJECT CONTACTED

- (00) No rollover
- (01-30) — Vehicle Number

Noncollision

- (31) Turn-over — fall-over
- (33) Jackknife

Collision With Fixed Object

- (41) Tree (≤ 10 cm in diameter)
- (42) Tree (> 10 cm in diameter)
- (43) Shrubbery or bush
- (44) Embankment

- (45) Breakaway pole or post (any diameter)

Nonbreakaway Pole or Post

- (50) Pole or post (≤ 10 cm in diameter)
- (51) Pole or post (> 10 cm but ≤ 30 cm in diameter)
- (52) Pole or post (> 30 cm in diameter)
- (53) Pole or post (diameter unknown)

- (54) Concrete traffic barrier
- (55) Impact attenuator
- (56) Other traffic barrier (includes guardrail)
(specify): _____

- (57) Fence
- (58) Wall
- (59) Building
- (60) Ditch or culvert
- (61) Ground
- (62) Fire hydrant
- (63) Curb
- (64) Bridge
- (68) Other fixed object (specify): _____

- (69) Unknown fixed object

Collision with Nonfixed Object

- (71) Motor vehicle not in-transport
- (76) Animal
- (77) Train
- (78) Trailer, disconnected in transport
- (88) Other nonfixed object (specify): _____

- (89) Unknown nonfixed object

- (98) Other event (specify): _____

- (99) Unknown event or object

PRECRASH DATA (Continued)

65. Critical Precrash Event

6 2*This Vehicle Loss of Control Due To:*

- (01) Blow out or flat tire
- (02) Stalled engine
- (03) Disabling vehicle failure (e.g., wheel fell off) (specify): _____
- (04) Non-disabling vehicle problem (e.g., hood flew up) (specify): _____
- (05) Poor road conditions (puddle, pot hole, ice, etc.) (specify): _____
- (06) Traveling too fast for conditions
- (08) Other cause of control loss (specify): _____
- (09) Unknown cause of control loss

This Vehicle Traveling

- (10) Over the lane line on left side of travel lane
- (11) Over the lane line on right side of travel lane
- (12) Off the edge of the road on the left side
- (13) Off the edge of the road on the right side
- (14) End departure
- (15) Turning left at intersection
- (16) Turning right at intersection
- (17) Crossing over (passing through) intersection
- (19) Unknown travel direction

Other Motor Vehicle In Lane

- (50) Stopped
- (51) Traveling in same direction with lower speed (i.e., lower steady speed or decelerating)
- (52) Traveling in same direction with higher speed
- (53) Traveling in opposite direction
- (54) In crossover
- (55) Backing
- (59) Unknown travel direction of other motor vehicle in lane

Other Motor Vehicle Encroaching Into Lane

- (60) From adjacent lane (same direction)—over left lane line
- (61) From adjacent lane (same direction)—over right lane line
- (62) From opposite direction—over left lane line
- (63) From opposite direction—over right lane line
- (64) From parking lane
- (65) From crossing street, turning into same direction
- (66) From crossing street, across path
- (67) From crossing street, turning into opposite direction
- (68) From crossing street, intended path not known
- (70) From driveway, turning into same direction
- (71) From driveway, across path
- (72) From driveway, turning into opposite direction
- (73) From driveway, intended path not known
- (74) From entrance to limited access highway
- (78) Encroachment by other vehicle—details unknown

Pedestrian or Pedalcyclist, or Other Nonmotorist

- (80) Pedestrian in roadway
- (81) Pedestrian approaching roadway
- (82) Pedestrian - unknown location
- (83) Pedalcyclist or other nonmotorist in roadway (specify): _____
- (84) Pedalcyclist or other nonmotorist approaching roadway (specify): _____
- (85) Pedalcyclist or other nonmotorist—unknown location (specify): _____

Object or Animal

- (87) Animal in roadway
- (88) Animal approaching roadway
- (89) Animal—unknown location
- (90) Object in roadway
- (91) Object approaching roadway
- (92) Object—unknown location
- (98) Other critical precrash event (specify): _____
- (99) Unknown

For Corrective Actions Attempted see variable GV14 (Attempted Avoidance Manuever)

66. Precrash Stability After Avoidance Maneuver 1

- (0) No avoidance maneuver
- (1) Tracking
- (2) Skidding longitudinally—rotation less than 30 degrees
- (3) Skidding laterally—clockwise rotation
- (4) Skidding laterally—counterclockwise rotation
- (7) Other vehicle loss-of-control (specify): _____
- (8) No driver present
- (9) Precrash stability unknown

67. Precrash Directional Consequences of Avoidance Maneuver (Corrective Action) 1

- (0) No avoidance maneuver
- (1) Vehicle stayed in travel lane where avoidance maneuver was initiated
- (2) Vehicle stayed on roadway but left travel lane where avoidance maneuver was initiated
- (3) Vehicle stayed on roadway, not known if left travel lane where avoidance maneuver was initiated
- (4) Vehicle departed roadway
- (5) Avoidance maneuver initiated off roadway
- (8) No driver present
- (9) Directional consequences unknown

*** IF THE CDS APPLICABLE VEHICLE WAS NOT INSPECTED (I.E., GV35 = 0), ***
DO NOT COMPLETE THE EXTERIOR AND INTERIOR VEHICLE FORMS.

*** IF GV07 DOES NOT EQUAL 01-49, DO NOT COMPLETE ***
THE EXTERIOR VEHICLE, INTERIOR VEHICLE,
OCCUPANT ASSESSMENT, AND OCCUPANT INJURY FORMS.

EXTERIOR VEHICLE FORM

**NATIONAL ACCIDENT SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM**

1. Primary Sampling Unit Number _____ 2. Case Number - Stratum <u>DSI-93-AB-013</u>		3. Vehicle Number <u>01</u>
--	--	-----------------------------

VEHICLE IDENTIFICATION

VIN 1 F A C P 5 0 4 5 L A * * * * * Model Year 9 0
Vehicle Make (specify): FORD Vehicle Model (specify): TAURUS L 4-DOOR

LOCATOR

Locate the end of the damage with respect to the vehicle longitudinal center line or bumper corner for end impacts or an undamaged axle for side impacts.

Specific Impact No.	Location of Direct Damage	Location of Field L
01	BEGINS RIGHT FRONT BUMPER CORNER	FULL FRONTAL

CRUSH PROFILE IN CENTIMETERS

NOTES: Identify the plane at which the C-measurements are taken (e.g., at bumper, above bumper, at sill, above sill, etc.) and label adjustments (e.g., free space).

Measure and document on the vehicle diagram the location of maximum crush.

Measure C1 to C6 from driver to passenger side in front or rear impacts and rear to front in side impacts.

Free space value is defined as the distance between the baseline and the original body contour taken at the individual C locations. This may include the following: bumper lead, bumper taper, side protrusion, side taper, etc. Record the value for each C-measurement and maximum crush.

Use as many lines/columns as necessary to describe each damage profile.

[illegible]

ORIGINAL SPECIFICATIONS WORK SHEET

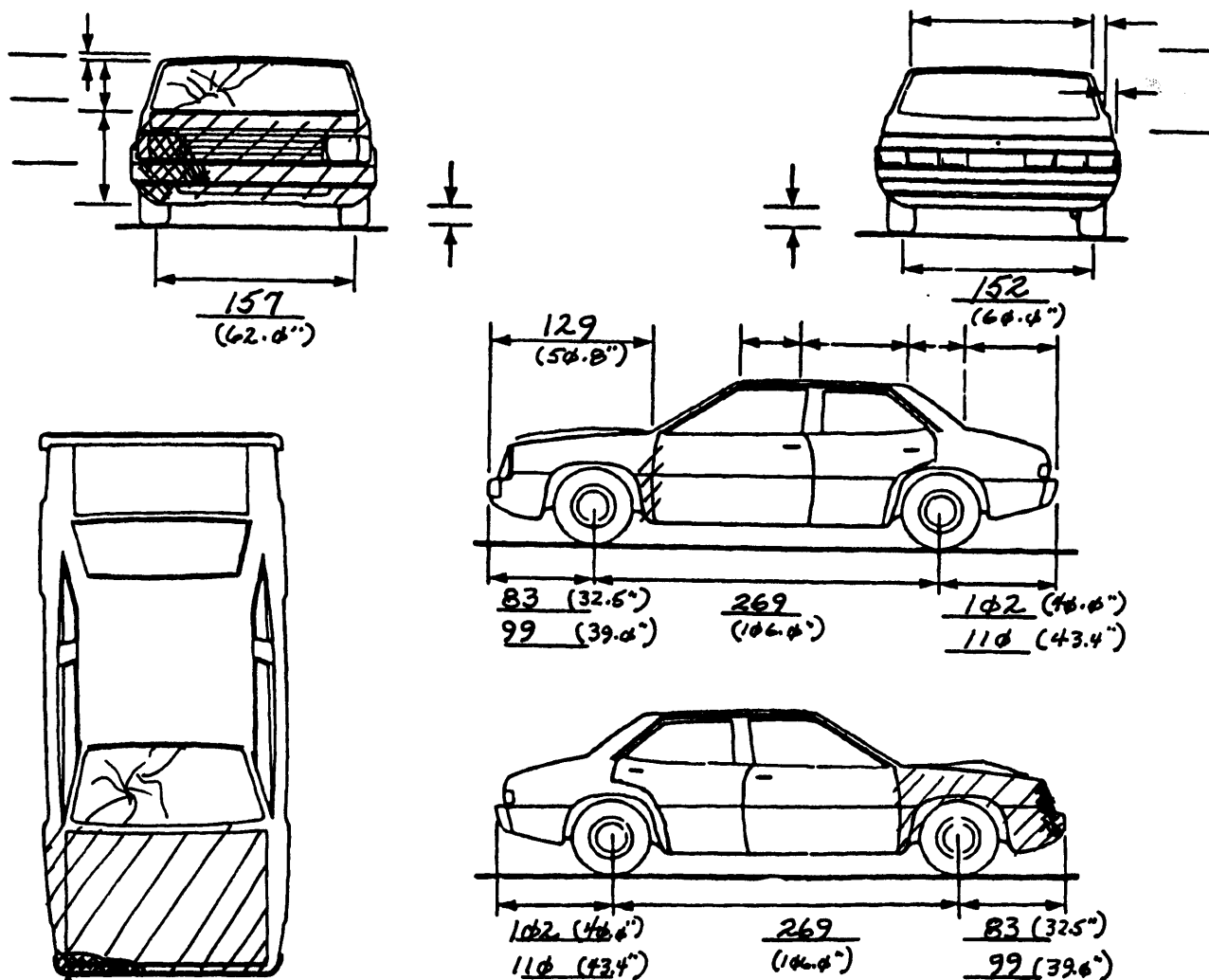
Wheelbase	<u>1</u> <u>0</u> <u>6</u> . <u>0</u> inches	x 2.54 =	<u>2</u> <u>6</u> <u>9</u> cm
Overall Length	<u>1</u> <u>8</u> <u>8</u> . <u>4</u> inches	x 2.54 =	<u>4</u> <u>7</u> <u>9</u> cm
Maximum Width	<u>0</u> <u>7</u> <u>0</u> . <u>8</u> inches	x 2.54 =	<u>1</u> <u>8</u> <u>0</u> cm
Curb Weight	<u>0</u> <u>2</u> , <u>9</u> <u>5</u> <u>6</u> pounds	x .4536 =	<u>1</u> , <u>3</u> <u>4</u> <u>1</u> kg
Average Track	<u>0</u> <u>6</u> <u>1</u> . <u>0</u> inches	x 2.54 =	<u>1</u> <u>5</u> <u>5</u> cm
Front Overhang	<u>0</u> <u>3</u> <u>9</u> . <u>0</u> inches	x 2.54 =	<u>0</u> <u>9</u> <u>9</u> cm
Rear Overhang	<u>0</u> <u>4</u> <u>3</u> . <u>4</u> inches	x 2.54 =	<u>1</u> <u>1</u> <u>0</u> cm
Undeformed End Width	<u>0</u> <u>6</u> <u>0</u> . <u>0</u> inches	x 2.54 =	<u>1</u> <u>5</u> <u>2</u> cm
Engine Size: cyl./displ.	<u>3</u> <u>0</u> <u>0</u> <u>0</u> cc	x .001 =	<u>3</u> . <u>0</u> L
	<u>1</u> <u>8</u> <u>3</u> CID	x .0164 =	<u>3</u> . <u>0</u> L

VEHICLE DAMAGE SKETCH

TIRE—WHEEL DAMAGE a. Rotation physically restricted b. Tire deflated RF <u>2</u> LF <u>2</u> RR <u>2</u> LR <u>2</u> RF <u>2</u> LF <u>2</u> RR <u>2</u> LR <u>2</u> (1) Yes (2) No (8) NA (9) Unk.		ORIGINAL SPECIFICATIONS Wheelbase <u>269</u> cm Overall Length <u>479</u> cm Maximum Width <u>180</u> cm Curb Weight <u>1,341</u> kg Average Track <u>155</u> cm Front Overhang <u>99</u> cm Rear Overhang <u>110</u> cm Undeformed End Width <u>152</u> cm Engine Size: cyl./displ. <u>V6/3.0</u> L		WHEEL STEER ANGLES (For locked front wheels or displaced rear axles only) RF ± <u>7</u> ° LF ± <u>7</u> ° RR ± <u>7</u> ° LR ± <u>7</u> ° Within ± 5 degrees
TYPE OF TRANSMISSION <input type="checkbox"/> Manual <input checked="" type="checkbox"/> Automatic		DRIVE WHEELS <input checked="" type="checkbox"/> FWD <input type="checkbox"/> RWD <input type="checkbox"/> 4WD		
		Approximate Cargo Weight <u>0</u> kg		

GAUGE STANDS A/DL

MEASUREMENTS IN CENTIMETERS



NOTES: Sketch new perimeter and cross hatch direct damage and single hatch induced damage on all views. Annotate observations which might be useful in reconstructing the accident (e.g., grass in tire bead, direction of striations, scuff on sidewalls, etc.). If pulling trailer, sketch type of trailer and damage received on the back of this page.

Annotate any damage caused by extrication such as component removal by torching, prying, or hydraulic shears.

CODES FOR OBJECT CONTACTED

(99) Unknown event or object

[illegible]

COLLISION DEFORMATION CLASSIFICATION

HIGHEST DELTA "V"

Accident Event Sequence Number	Object Contacted	(1) (2) Direction of Force	(3) Deformation Location	(4) Longitudinal or Lateral Location	(5) Vertical or Lateral Location	(6) Type of Damage Distribution	(7) Deformation Extent
4. <u>φ 1</u>	5. <u>φ 2</u>	6. <u>1 2</u>	7. <u>F</u>	8. <u>Z</u>	9. <u>E</u>	10. <u>W</u>	11. <u>φ 1</u>

Second Highest Delta "V"

12. _____	13. _____	14. _____	15. _____	16. _____	17. _____	18. _____	19. _____
-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------

CRUSH PROFILE IN CENTIMETERS

The crush profile for the damage described in the CDC(s) above should be documented in the appropriate space below. (ALL MEASUREMENTS ARE IN CENTIMETERS.)

HIGHEST DELTA "V"

20. <u>L</u>	21. <u>C₁</u>	<u>C₂</u>	<u>C₃</u>	<u>C₄</u>	<u>C₅</u>	<u>C₆</u>	22. <u>±D</u>
<u>1 5 2</u> (66")	<u>φ φ φ</u>	<u>φ φ φ</u>	<u>φ φ φ</u>	<u>φ φ 1</u> (.4")	<u>φ φ 2</u> (.61")	<u>φ φ 5</u> (.62")	<u>⊕</u> <u>- φ 4 8</u> (+ 19")

Second Highest Delta "V"

23. <u>L</u>	24. <u>C₁</u>	<u>C₂</u>	<u>C₃</u>	<u>C₄</u>	<u>C₅</u>	<u>C₆</u>	25. <u>±D</u>
_____	_____	_____	_____	_____	_____	_____	<u>+</u> <u>-</u>

26. Are CDCs Documented but Not Coded on The Automated File?
(0) No
(1) Yes

φ

27. Researcher's Assessment of Vehicle Disposition
(0) Not towed due to vehicle damage
(1) Towed due to vehicle damage
(9) Unknown

φ

28. Original Wheelbase 2 6 9
Code to the nearest centimeter
(999) Unknown

1 φ 6 . φ inches X 2.54 = 2 6 9 centimeters

29. Is This A Multi-Stage Manufactured Vehicle
And/Or A Certified Altered Vehicle?

0

(0) No post manufacturer modifications

(1) Yes - post manufacturer modifications
(specify): _____

(Include photograph of CERTIFICATION
PLACARD in case report)

(9) Unknown if vehicle is modified

30. Fire Occurrence

1

(0) No fire

Yes, fire occurred

(1) Minor

(2) Major

(9) Unknown

31. Origin of Fire

8

(0) No fire

(1) Vehicle exterior (front, side, back, top)

(2) Exhaust system

(3) Fuel tank (and other fuel retention
system parts)

(4) Engine compartment

(5) Cargo/trunk compartment

(6) Instrument panel

(7) Passenger compartment area

(8) Other location (specify):

AIR BAG / AIR BAG MODULE

(9) Unknown

32. Type of Fuel Tank

1

(0) No fuel tank (electrical vehicle)

(1) Metallic

(2) Non-metallic

(9) Unknown

*** STOP: IF THE CDS APPLICABLE VEHICLE WAS NOT TOWED AND WAS NOT AN AOPS ***
(I.E., GV09 = 0 OR 9 AND GV36 = 0), DO NOT COMPLETE THE INTERIOR VEHICLE FORM.



INTERIOR VEHICLE FORM

1. Primary Sampling Unit Number _____

2. Case Number - Stratum DSI-93-AB-013

3. Vehicle Number 01

INTEGRITY

4. Passenger Compartment Integrity 00
(00) No integrity loss

Yes, Integrity Was Lost Through

- (01) Windshield
- (02) Door (side)
- (03) Door/hatch (back door)
- (04) Roof
- (05) Roof glass
- (06) Side window
- (07) Rear window (backlight)
- (08) Roof and roof glass
- (09) Windshield and door (side)
- (10) Windshield and roof
- (11) Side and rear window (side window and backlight)
- (12) Windshield and side window
- (13) Door and side window
- (98) Other combination of above (specify): _____

(99) Unknown _____

Door, Tailgate or Hatch Opening

5. LF 1 6. RF 1 7. LR 1 8. RR 1 9. TG/H 0

- (0) No door/gate/hatch
- (1) Door/gate/hatch remained closed and operational
- (2) Door/gate/hatch came open during collision
- (3) Door/gate/hatch jammed shut
- (8) Other (specify): _____
- (9) Unknown _____

Damage/Failure Associated with Door, Tailgate or Hatch Opening in Collision. If IV05-IV09 ≠ 2, Then code 0

10. LF 0 11. RF 0 12. LR 0 13. RR 0 14. TG/H 0

- (0) No door/gate/hatch or door not opened

Door, Tailgate or Hatch Came Open During Collision

- (1) Door operational (no damage)
- (2) Latch/striker failure due to damage
- (3) Hinge failure due to damage
- (4) Door structure failure due to damage
- (5) Door support (i.e., pillar, sill, roof side rail, etc.) failure due to damage
- (6) Latch/striker and hinge failure due to damage
- (8) Other failure (specify): _____

(9) Unknown _____

GLAZING

Glazing Damage from Impact Forces

15. WS 2 16. LF 0 17. RF 0 18. LR 0 19. RR 0
20. BL 0 21. Roof 0 22. Other 0

- (0) No glazing damage from impact forces
- (2) Glazing in place and cracked from impact forces
- (3) Glazing in place and holed from impact forces
- (4) Glazing out-of-place (cracked or not) and not holed from impact forces
- (5) Glazing out-of-place and holed from impact forces
- (6) Glazing disintegrated from impact forces
- (7) Glazing removed prior to accident
- (8) No glazing
- (9) Unknown if damaged

Glazing Damage from Occupant Contact

23. WS 0 24. LF 0 25. RF 0 26. LR 0 27. RR 0
28. BL 0 29. Roof 0 30. Other 0

- (0) No occupant contact to glazing or no glazing
- (1) Glazing contacted by occupant but no glazing damage
- (2) Glazing in place and cracked by occupant contact
- (3) Glazing in place and holed by occupant contact
- (4) Glazing out-of-place (cracked or not) by occupant contact and not holed by occupant contact
- (5) Glazing out-of-place by occupant contact and holed by occupant contact
- (6) Glazing disintegrated by occupant contact
- (9) Unknown if contacted by occupant

If No Glazing Damage **And** No Occupant Contact or No Glazing, Then Code IV31 Through IV46 As 0

Type of Window/Windshield Glazing

31. WS 1 32. LF 0 33. RF 0 34. LR 0 35. RR 0
36. BL 0 37. Roof 0 38. Other 0

- (0) No glazing contact and no damage, or no glazing
- (1) AS-1 — Laminated
- (2) AS-2 — Tempered
- (3) AS-3 — Tempered-tinted
- (4) AS-14 — Glass/Plastic
- (8) Other (specify): _____
- (9) Unknown _____

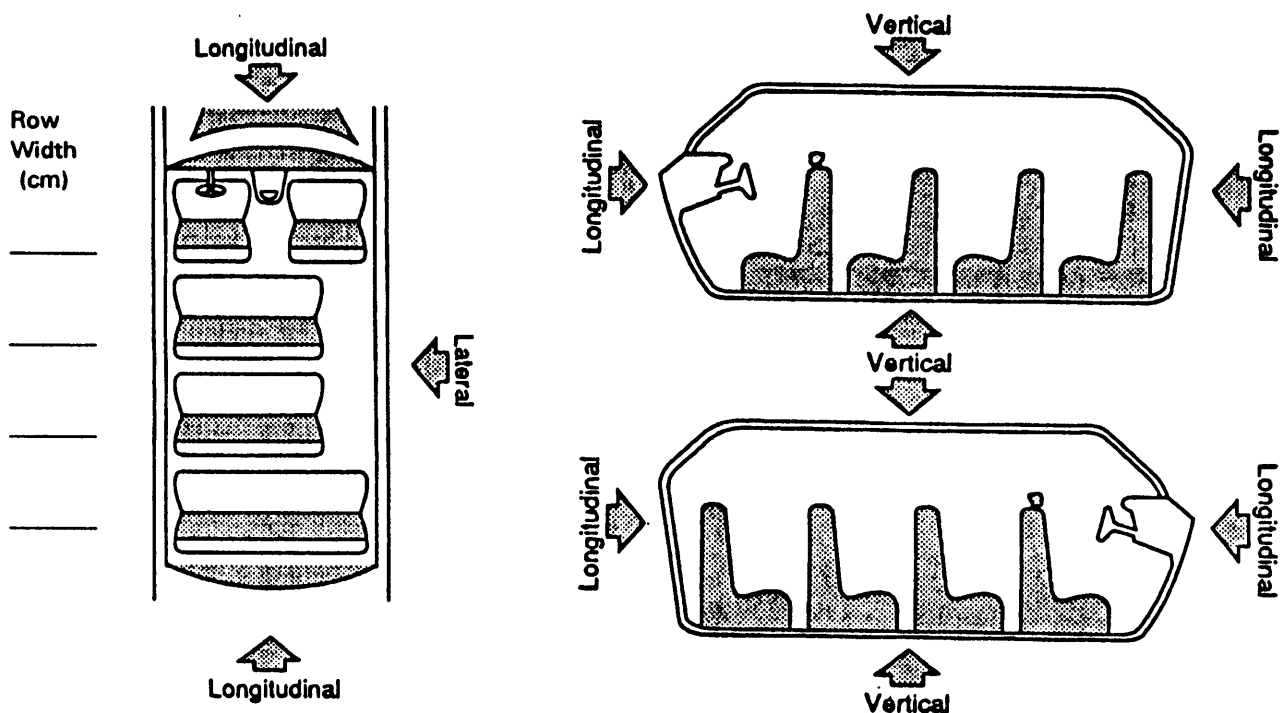
Window Precrash Glazing Status

39. WS 1 40. LF 0 41. RF 0 42. LR 0 43. RR 0
44. BL 0 45. Roof 0 46. Other 0

- (0) No glazing contact and no damage, or no glazing
- (1) Fixed
- (2) Closed
- (3) Partially opened
- (4) Fully opened
- (9) Unknown

INTRUSION WORKSHEET

Note: Sketch intruded areas



LOCATION OF INTRUSION	INTRUDED COMPONENT	(All Measurements Are In Centimeters)			INTRUSION	DOMINANT CRUSH DIRECTION
		COMPARISON VALUE	INTRUDED VALUE	=		
		-		=		
		-		=		
		-		=		
		-		=		
		-		=		
		-		=		
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		-		=		
		-		=		
		-		=		

NO INTRUSIONS

OCCUPANT AREA INTRUSION

Note: If no intrusions, leave variables IV47-IV86 blank.

INTRUDING COMPONENT*Interior Components*

- (01) Steering assembly
- (02) Instrument panel left
- (03) Instrument panel center
- (04) Instrument panel right
- (05) Toe pan
- (06) A (A1/A2)-pillar
- (07) B-pillar
- (08) C-pillar
- (09) D-pillar
- (10) Door panel (side)
- (12) Roof (or convertible top)
- (13) Roof side rail
- (14) Windshield
- (15) Windshield header
- (16) Window frame
- (17) Floor pan (includes sill)
- (18) Backlight header
- (19) Front seat back
- (20) Second seat back
- (21) Third seat back
- (22) Fourth seat back
- (23) Fifth seat back
- (24) Seat cushion
- (25) Back door/panel (e.g., tailgate)
- (26) Other interior component (specify):

- (27) Side panel - forward of the A (A2)-pillar
- (28) Side panel - rear of the A (A2)-pillar

Exterior Components

- (30) Hood
- (31) Outside surface of this vehicle (specify):
- (32) Other exterior object in the environment (specify):
- (33) Unknown exterior object
- (97) Catastrophic
- (98) Intrusion of unlisted component(s) (specify):
- (99) Unknown

	Location of Intrusion	Intruding Component	Magnitude of Intrusion	Dominant Crush Direction
1st	47. _____	48. _____	49. _____	50. _____
2nd	51. _____	52. _____	53. _____	54. _____
3rd	55. _____	56. _____	57. _____	58. _____
4th	59. _____	60. _____	61. _____	62. _____
5th	63. _____	64. _____	65. _____	66. _____
6th	67. _____	68. _____	69. _____	70. _____
7th	71. _____	72. _____	73. _____	74. _____
8th	75. _____	76. _____	77. _____	78. _____
9th	79. _____	80. _____	81. _____	82. _____
10th	83. _____	84. _____	85. _____	86. _____

LOCATION OF INTRUSION**Front Seat**

- (11) Left
- (12) Middle
- (13) Right

Fourth Seat

- (41) Left
- (42) Middle
- (43) Right

Second Seat

- (21) Left
- (22) Middle
- (23) Right

- (97) Catastrophic
- (98) Other enclosed area (specify)

(99) Unknown

Third Seat

- (31) Left
- (32) Middle
- (33) Right

MAGNITUDE OF INTRUSION

- (1) ≥ 3 centimeters but < 8 centimeters
- (2) ≥ 8 centimeters but < 15 centimeters
- (3) ≥ 15 centimeters but < 30 centimeters
- (4) ≥ 30 centimeters but < 46 centimeters
- (5) ≥ 46 centimeters but < 61 centimeters
- (6) ≥ 61 centimeters
- (7) Catastrophic
- (9) Unknown

DOMINANT CRUSH DIRECTION

- (1) Vertical
- (2) Longitudinal
- (3) Lateral
- (7) Catastrophic
- (9) Unknown

STEERING RIM/SPOKE DEFORMATION

(All Measurements Are in Centimeters)

COMPARISON VALUE

—

DAMAGE VALUE

=

DEFORMATION

—

=

—

=

—

=

—

=

STEERING COLUMN87. Steering Column Type 2

- (1) Fixed column
 (2) Tilt column
 (3) Telescoping column
 (4) Tilt and telescoping column
 (8) Other column type (specify): _____

(9) Unknown

88. Blank X X

(This variable is left blank so that numbering consistency can be maintained with the 1988-93 CDS.

89. Blank X X X

(This variable is left blank so that numbering consistency can be maintained with the 1988-93 CDS.

90. Blank X X X

(This variable is left blank so that numbering consistency can be maintained with the 1988-93 CDS.

91. Blank X X X

(This variable is left blank so that numbering consistency can be maintained with the 1988-93 CDS.

92. Steering Rim/Spoke Deformation φ φ

- Code actual measured deformation to the nearest centimeter
 (00) No steering rim deformation
 (01-14) Actual measured value in centimeters
 (15) 15 centimeters or more
 (98) Observed deformation cannot be measured
 (99) Unknown

93. Location of Steering Rim/Spoke Deformation φ φ

(00) No steering rim deformation

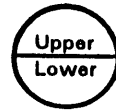
Quarter Sections

- (01) Section A
 (02) Section B
 (03) Section C
 (04) Section D



Half Sections

- (05) Upper half of rim/spoke
 (06) Lower half of rim/spoke
 (07) Left half of rim/spoke
 (08) Right half of rim/spoke



- (09) Complete steering wheel collapse
 (10) Undetermined location
 (99) Unknown

INSTRUMENT PANEL94. Odometer Reading 1 5 2,000

_____ kilometers—Code to the nearest 1,000 kilometers

- (000) No odometer
 (001) Less than 1,500 kilometers
 (500) 499,500 kilometers or more
 (999) Unknown

φ 2 4 3 5 6 miles X 1.6093 = 1 5 1 8 4 7 kilometers

Source: INSPECTION

95. Instrument Panel Damage from Occupant Contact? φ

- (0) No
 (1) Yes
 (9) Unknown

96. Knee Bolsters Deformed from Occupant Contact? 8

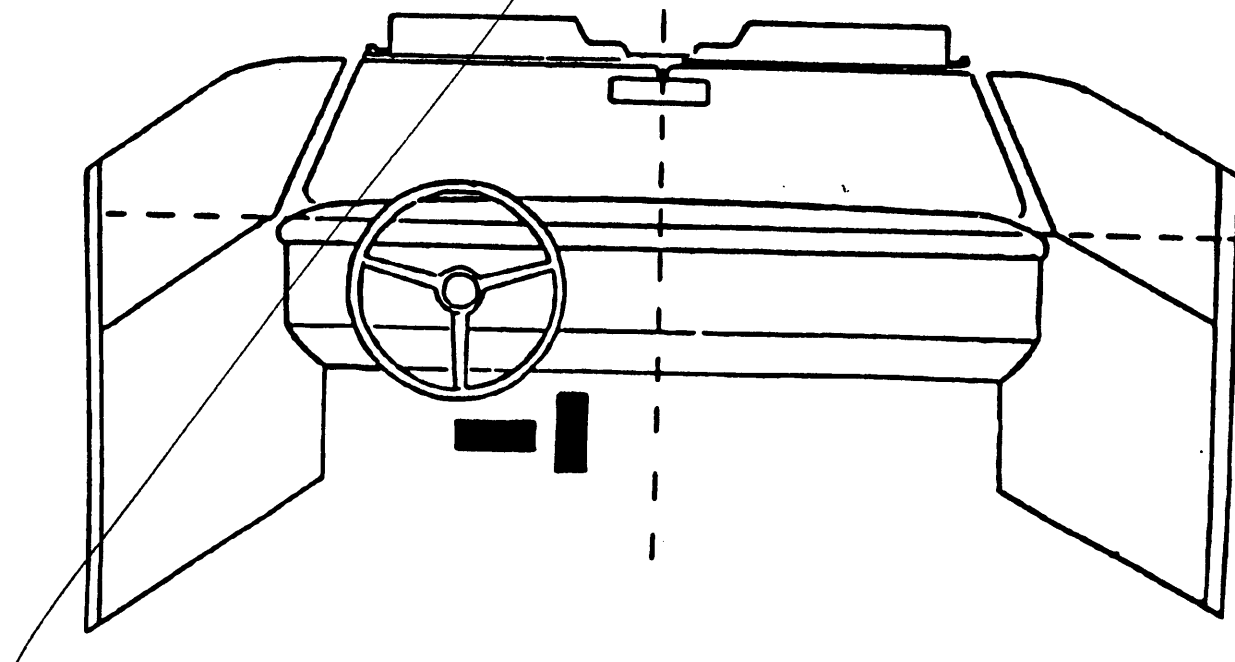
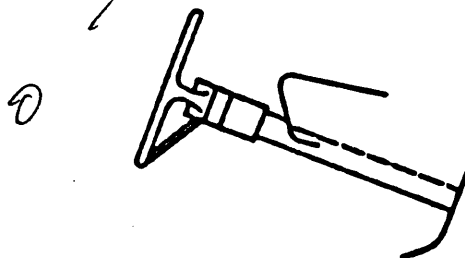
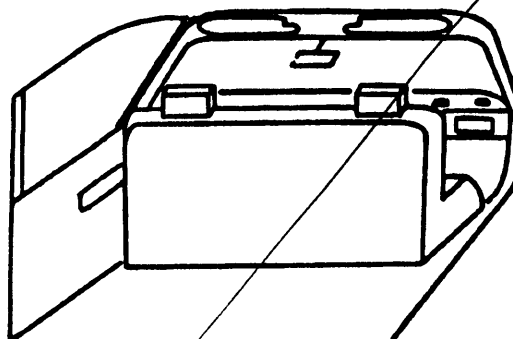
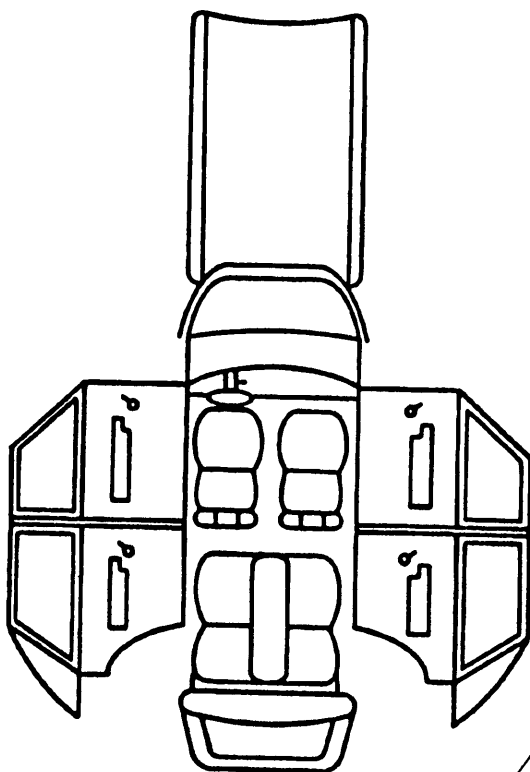
- (0) No
 (1) Yes
 (8) Not present
 (9) Unknown

97. Did Glove Compartment Door Open During Collision(s)? φ

- (0) No
 (1) Yes
 (8) Not present
 (9) Unknown

VEHICLE INTERIOR SKETCHES

Note area of ejection/entrapment



Sketch windshield contact(s) and the damaged area(s) on the instrument panel outline (e.g., radio, glove compartment, damage to instrument panel structure).

Cross hatch contact points, draw spider webs or use other annotation as may be appropriate.

Annotate the contacted area with a letter (begin with A) and list on the Points of Occupant Contact page.

POINTS OF OCCUPANT CONTACT

Contact	Interior Component Contacted	Occupant No. If Known	Body Region If Known	Supporting Physical Evidence	Confidence Level of Contact Point
A					
B					
C					
D					
E					
F					
G					
H			2		
I					
J					
K					
L					
M					
N					

CODES FOR INTERIOR COMPONENTS

FRONT

- (01) Windshield
- (02) Mirror
- (03) Sunvisor
- (04) Steering wheel rim
- (05) Steering wheel hub/spoke
- (06) Steering wheel (combination of codes 04 and 05)
- (07) Steering column, transmission selector lever, other attachment
- (08) Add on equipment (e.g., CB, tape deck, air conditioner)
- (09) Left instrument panel and below
- (10) Center instrument panel and below
- (11) Right instrument panel and below
- (12) Glove compartment door
- (13) Knee bolster
- (14) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, mirror, or steering assembly (driver side only)
- (15) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, or mirror (passenger side only)
- (16) Driver side air bag compartment cover
- (17) Passenger side air bag compartment cover
- (18) Windshield reinforced by exterior object (specify): _____
- (19) Other front object (specify): _____

LEFT SIDE

- (20) Left side interior surface, excluding hardware or armrests
- (21) Left side hardware or armrest
- (22) Left A (A1/A2)-pillar

- (23) Left B-pillar
- (24) Other left pillar (specify): _____

- (25) Left side window glass or frame
- (26) Left side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B-pillar, or roof side rail.
- (27) Other left side object (specify): _____

- (28) Left side window sill

RIGHT SIDE

- (30) Right side interior surface, excluding hardware or armrests
- (31) Right side hardware or armrest
- (32) Right A (A1/A2)-pillar
- (33) Right B-pillar
- (34) Other right pillar (specify): _____
- (35) Right side window glass or frame
- (36) Right side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B pillar, or roof side rail.
- (37) Other right side object (specify): _____
- (38) Right side window sill

INTERIOR

- (40) Seat, back support
- (41) Belt restraint webbing/buckle
- (42) Belt restraint B-pillar attachment point
- (43) Other restraint system component (specify): _____
- (44) Head restraint system
- (45) Air bag (use codes "16" and "17" for injuries sustained from air bag compartment covers)

- (46) Other occupants (specify): _____

- (47) Interior loose objects
- (48) Child safety seat (specify): _____

- (49) Other interior object (specify): _____

ROOF

- (50) Front header
- (51) Rear header
- (52) Roof left side rail
- (53) Roof right side rail
- (54) Roof or convertible top

FLOOR

- (56) Floor (including toe pan)
- (57) Floor or console mounted transmission lever, including console
- (58) Parking brake handle
- (59) Foot controls including parking brake

REAR

- (60) Backlight (rear window)
- (61) Backlight storage rack, door, etc.
- (62) Other rear object (specify): _____

CONFIDENCE LEVEL OF CONTACT POINT

- (1) Certain
- (2) Probable
- (3) Possible
- (9) Unknown

AUTOMATIC RESTRAINTS

NOTES: Encode the data for each applicable front seat position. The attribute for the variables may be found below. Restraint systems should be assessed during the vehicle inspection then coded on the Occupant Assessment Form.

AIR BAGS

		Left	Right
F I R S T	Availability/Function	1	φ
	Deployment	1	φ
	Failure	2	φ

Air Bag System Availability/Function

- (0) Not equipped/not available
(1) Air bag

No...functional

- (2) Air bag disconnected (specify):

(3) Air bag not reinstalled
(9) Unknown

Air Bag System Deployment

- (0) Not equipped/not available
(1) Air bag deployed during accident (as a result of impact)
(2) Air bag deployed inadvertently just prior to accident
(3) Air bag deployed, accident sequence undetermined
(4) Nondeployed
(5) Unknown if deployed
(6) Air bag deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)
(9) Unknown

Did Air Bag System Fail?

- (0) Not equipped/not available
(1) No
(2) Yes (specify):
Faulty Inflator
(9) Unknown

AUTOMATIC BELTS

		Left	Right
F I R S T	Availability/Function	φ	φ
	Use	φ	φ
	Type	φ	φ
	Proper Use	φ	φ
	Failure Modes	φ	φ

Automatic (Passive) Belt System Availability/Function

- (0) Not equipped/not available
(1) 2 point automatic belts
(2) 3 point automatic belts
(3) Automatic belts - type unknown

Non-functional

- (4) Automatic belts destroyed or rendered inoperative
(9) Unknown

Automatic (Passive) Belt System Use

- (0) Not equipped/not available/destroyed or rendered inoperative
(1) Automatic belt in use
(2) Automatic belt not in use (manually disconnected, motorized track inoperative)
(3) Automatic belt use unknown
(9) Unknown

Automatic (Passive) Belt System Type

- (0) Not equipped/not available
(1) Non-motorized system
(2) Motorized system
(9) Unknown

Proper Use of Automatic (Passive) Belt System

- (0) Not equipped/not available/not used
(1) Automatic belt used properly
(2) Automatic belt used properly with child safety seat

Automatic Belt Used Improperly

- (3) Automatic shoulder belt worn under arm
(4) Automatic shoulder belt worn behind back
(5) Automatic belt worn around more than one person
(6) Lap portion of automatic belt worn on abdomen
(7) Automatic lap and shoulder belt or automatic shoulder belt used improperly with child safety seat (specify):

(8) Other improper use of automatic belt system (specify):

(9) Unknown

Automatic (Passive) Belt Failure Modes During Accident

- (0) Not equipped/not available/not in use
(1) No automatic belt failure(s)
(2) Torn webbing (stretched webbing not included)
(3) Broken buckle or latchplate
(4) Upper anchorage separated
(5) Other anchorage separated (specify):

(6) Broken retractor
(7) Combination of above (specify):
(8) Other automatic belt failure (specify):

(9) Unknown

MANUAL RESTRAINTS

NOTES: Encode the applicable data for each seat position in the vehicle. The attribute for the variable may be found below. Restraint systems should be assessed during the vehicle inspection then coded on the Occupant Assessment Form.

If a Child safety seat is present, encode the data on the back of this page.

If the vehicle has automatic restraints available, encode the appropriate data on the back of the previous page.

		Left	Center	Right
FIRST	Availability	4	3	4
	Use	φ4	φ φ	φ4
	Failure Modes	1	φ	1
SECOND	Availability	4	3	4
	Use	φ4	φφ	φφ
	Failure Modes	1	φ	φ
THIRD	Availability			
	Use			
	Failure Modes			
OTHER	Availability			
	Use			
	Failure Modes			

Manual (Active) Belt System Availability

- (0) None available
- (1) Belt removed/destroyed
- (2) Shoulder belt
- (3) Lap belt
- (4) Lap and shoulder belt
- (5) Belt available - type unknown

Integral Belt Partially Destroyed

- (6) Shoulder belt (lap belt destroyed/removed)
- (7) Lap belt (shoulder belt destroyed/removed)

(8) Other belt (specify): _____

(9) Unknown _____

Manual (Active) Belt System Use

- (00) None used, not available, or belt removed/destroyed
- (01) Inoperable (specify): _____
- (02) Shoulder belt
- (03) Lap belt
- (04) Lap and shoulder belt
- (05) Belt used - type unknown

(08) Other belt used (specify):

- (12) Shoulder belt used with child safety seat
- (13) Lap belt used with child safety seat
- (14) Lap and shoulder belt used with child safety seat
- (15) Belt used with child safety seat - type unknown
- (18) Other belt used with child safety seat (specify): _____
- (99) Unknown if belt used

Manual (Active) Belt Failure Modes During Accident

- (0) No manual belt used or not available
- (1) No manual belt failure(s)
- (2) Torn webbing (stretched webbing not included)
- (3) Broken buckle or latchplate
- (4) Upper anchorage separated
- (5) Other anchorage separated (specify): _____
- (6) Broken retractor
- (7) Combination of above (specify): _____
- (8) Other manual belt failure (specify): _____
- (9) Unknown

CHILD SAFETY SEAT FIELD ASSESSMENT

When a child safety seat is present enter the occupant's number in the first row and complete the column below the occupant's number using the codes listed below. Complete a column for each child safety seat present.

Occupant Number						
1. Type of Child Safety Seat						
2. Child Safety Seat Orientation						
3. Child Safety Seat Harness Usage			0			
4. Child Safety Seat Shield Usage						
5. Child Safety Seat Tether Usage						
6. Child Safety Seat Make/Model	Specify Below for Each Child Safety Seat					

1. Type of Child Safety Seat

- (0) No child safety seat
- (1) Infant seat
- (2) Toddler seat
- (3) Convertible seat
- (4) Booster seat
- (7) Other type child safety seat (specify):

- (8) Unknown child safety seat type
- (9) Unknown if child safety seat used

2. Child Safety Seat Orientation

- (00) No child safety seat
- Designed for Rear Facing for This Age/Weight
- (01) Rear facing
- (02) Forward facing
- (08) Other orientation (specify):
- (09) Unknown orientation

Designed for Forward Facing for This Age/Weight

- (11) Rear facing
- (12) Forward facing
- (18) Other orientation (specify):

- (19) Unknown orientation

Unknown Design or Orientation For This Age/Weight, or Unknown Age/Weight

- (21) Rear facing
- (22) Forward facing
- (28) Other orientation (specify):

- (29) Unknown orientation

- (99) Unknown if child safety seat used

3. Child Safety Seat Harness Usage

4. Child Safety Seat Shield Usage

5. Child Safety Seat Tether Usage

Note: Options Below Are Used for Variables 3-5.

- (00) No child safety seat

Not Designed with Harness/Shield/Tether

- (01) After market harness/shield/tether added, not used
- (02) After market harness/shield/tether used
- (03) Child safety seat used, but no after market harness/shield/tether added
- (09) Unknown if harness/shield/tether added or used

Designed With Harness/Shield/Tether

- (11) Harness/shield/tether not used
- (12) Harness/shield/tether used
- (19) Unknown if harness/shield/tether used

Unknown If Designed With Harness/Shield/Tether

- (21) Harness/shield/tether not used
- (22) Harness/shield/tether used
- (29) Unknown if harness/shield/tether used

- (99) Unknown if child safety seat used

6. Child Safety Seat Make/Model

(Specify make/model and occupant number)

HEAD RESTRAINTS/SEAT EVALUATION

NOTES: Encode the applicable data for each seat position in the vehicle. The attribute for these variables may be found at the bottom of the page. Head restraint type/damage and seat type/performance should be assessed during the vehicle inspection then coded on the Occupant Assessment Form.

		Left	Center	Right
FIRST	Head Restraint Type/Damage	3	φ	3
	Seat Type	φ6	φ6	φ6
	Seat Performance	1	1	1
	Seat Orientation	1	1	1
SECOND	Head Restraint Type/Damage	φ	φ	φ
	Seat Type	φ3	φ3	φ3
	Seat Performance	1	1	1
	Seat Orientation	1	1	1
THIRD	Head Restraint Type/Damage			
	Seat Type			
	Seat Performance			
	Seat Orientation			
OTHER	Head Restraint Type/Damage			
	Seat Type			
	Seat Performance			
	Seat Orientation			

Head Restraint Type/Damage by Occupant at This Occupant Position

- (0) No head restraints
- (1) Integral — no damage
- (2) Integral — damaged during accident
- (3) Adjustable — no damage
- (4) Adjustable — damaged during accident
- (5) Add-on — no damage
- (6) Add-on — damaged during accident
- (8) Other Specify:

(9) Unknown

Seat Type (this Occupant Position)

- (00) Occupant not seated or no seat
- (01) Bucket
- (02) Bucket with folding back
- (03) Bench
- (04) Bench with separate back cushions
- (05) Bench with folding back(s)
- (06) Split bench with separate back cushions
- (07) Split bench with folding back(s)
- (08) Pedestal (i.e., column supported)
- (09) Other seat type (specify):

(10) Box mounted seat (i.e., van type)
 (99) Unknown

Seat Performance (this Occupant Position)

- (0) Occupant not seated or no seat
- (1) No seat performance failure(s)
- (2) Seat adjusters failed
- (3) Seat back folding locks or "seat back" failed specify:
- (4) Seat tracks/anchors failed
- (5) Deformed by impact of occupant
- (6) Deformed by passenger compartment intrusion (specify):

(7) Combination of above (specify):

(8) Other (specify):

(9) Unknown

Seat Orientation (this Occupant Position)

- (0) Occupant not seated or no seat
- (1) Forward facing seat
- (2) Rear facing seat
- (3) Side facing seat (inward)
- (4) Side facing seat (outward)
- (8) Other (specify):

(9) Unknown

DESCRIBE ANY INDICATION OF ABNORMAL OCCUPANT POSTURE (I.E., UNUSUAL OCCUPANT CONTACT PATTERN)

EJECTION/ENTRAPMENT DATA

Complete the following if the researcher has any indication that an occupant was either ejected from or entrapped in the vehicle. Code the appropriate data on the Occupant Assessment Form.

EJECTION No [☒] Yes []

Describe indications of ejection and body parts involved in partial ejection(s):

Occupant Number						
Ejection						
(Note on Vehicle Interior Sketch) Ejection Area						
Ejection Medium						
Medium Status						

Ejection

- (1) Complete ejection
- (2) Partial ejection
- (3) Ejection, Unknown degree
- (9) Unknown

Ejection Area

- (1) Windshield
- (2) Left front
- (3) Right front
- (4) Left rear
- (5) Right rear
- (6) Rear

(7) Roof

- (8) Other area (e.g., back of pickup, etc.) (specify):

(9) Unknown**Ejection Medium**

- (1) Door/hatch/tailgate
- (2) Nonfixed roof structure
- (3) Fixed glazing
- (4) Nonfixed glazing (specify):

(5) Integral structure

- (8) Other medium (specify):

(9) Unknown**Medium Status (Immediately Prior to Impact)**

- (1) Open
- (2) Closed
- (3) Integral structure
- (9) Unknown

ENTRAPMENT No [☒] Yes []

Describe entrapment mechanism: _____

Component(s): _____

(Note in vehicle interior diagram)



OCCUPANT ASSESSMENT FORM

OCCUPANT'S SEATING

1. Primary Sampling Unit Number _____

2. Case Number - Stratum DSI-93-AB-013

3. Vehicle Number 01

4. Occupant Number 01

OCCUPANT'S CHARACTERISTICS

5. Occupant's Age 46

Code actual age at time of accident.
(00) Less than one year old (specify by month):

(97) 97 years and older
(99) Unknown

6. Occupant's Sex 2

(1) Male
(2) Female
(9) Unknown

7. Occupant's Height 999

Code actual height to the nearest
centimeter.
(999) Unknown

_____ inches X 2.54 = _____ centimeters

8. Occupant's Weight 999

Code actual weight to the nearest
kilogram.
(999) Unknown

_____ pounds X .4536 = _____ kilograms

9. Occupant's Role 1

(1) Driver
(2) Passenger
(9) Unknown

10. Occupant's Seat Position 11

Front Seat

(11) Left side
(12) Middle
(13) Right side
(14) Other (specify): _____
(15) On or in the lap of another occupant

Second Seat

(21) Left side
(22) Middle
(23) Right side
(24) Other (specify): _____
(25) On or in the lap of another occupant

Third Seat

(31) Left side
(32) Middle
(33) Right side
(34) Other (specify): _____
(35) On or in the lap of another occupant

Fourth Seat

(41) Left side
(42) Middle
(43) Right side
(44) Other (specify): _____
(45) On or in the lap of another occupant

(97) In or on unenclosed area
(98) Other seat (specify): _____
(99) Unknown

11. Occupant's Posture 0

(0) Normal posture

Abnormal posture

(1) Kneeling or standing on seat
(2) Lying on or across seat
(3) Kneeling, standing or sitting in front of seat
(4) Sitting sideways or turned to talk with another occupant or to look out a rear window
(5) Sitting on a console
(6) Lying back in a reclined seat position
(7) Bracing with feet or hands on a surface in front of seat
(8) Other abnormal posture (specify): _____
(9) Unknown

EJECTION/ENTRAPMENT

12. Ejection φ

- (0) No ejection
- (1) Complete ejection
- (2) Partial ejection
- (3) Ejection, unknown degree
- (9) Unknown

13. Ejection Area φ

- (0) No ejection
- (1) Windshield
- (2) Left front
- (3) Right front
- (4) Left rear
- (5) Right rear
- (6) Rear
- (7) Roof
- (8) Other area (e.g., back of pickup, etc.)
(specify): _____
- (9) Unknown

14. Ejection Medium φ

- (0) No ejection
- (1) Door/hatch/tailgate
- (2) Nonfixed roof structure
- (3) Fixed glazing
- (4) Nonfixed glazing (specify): _____
- (5) Integral structure
- (8) Other medium (specify): _____
- (9) Unknown

15. Medium Status (Immediately Prior To Impact) φ

- (0) No ejection
- (1) Open
- (2) Closed
- (3) Integral structure
- (9) Unknown

16. Entrapment φ

(NOTE: Entrapped means that part of the person was in the vehicle and mechanically restrained; jammed doors and immobilizing injuries by themselves are not sufficient to constitute entrapment.)

- (0) Not entrapped
- (1) Entrapped
- (9) Unknown

RESTRAINT SYSTEM EVALUATION

17. Manual (Active) Belt System Availability 4

- (0) None available
- (1) Belt removed/destroyed
- (2) Shoulder belt
- (3) Lap belt
- (4) Lap and shoulder belt
- (5) Belt available—type unknown

Integral Belt Partially Destroyed

- (6) Shoulder belt (lap belt destroyed/removed)
- (7) Lap belt (shoulder belt destroyed/removed)

(8) Other belt (specify): _____

(9) Unknown _____

18. Manual (Active) Belt System Use 0 4

- (00) None used, not available, or belt removed/destroyed
- (01) Inoperative (specify): _____

(02) Shoulder belt _____

(03) Lap belt _____

(04) Lap and shoulder belt _____

(05) Belt used—type unknown _____

(08) Other belt used (specify): _____

(12) Shoulder belt used with child safety seat _____

(13) Lap belt used with child safety seat _____

(14) Lap and shoulder belt used with child safety seat _____

(15) Belt used with child safety seat—type unknown _____

(18) Other belt used with child safety seat (specify): _____

(99) Unknown if belt used _____

19. Proper Use of Manual (Active) Belts 1

- (0) None used or not available
- (1) Belt used properly
- (2) Belt used properly with child safety seat

Belt Used Improperly

- (3) Shoulder belt worn under arm
- (4) Shoulder belt worn behind back or seat
- (5) Belt worn around more than one person
- (6) Lap belt worn on abdomen
- (7) Lap belt or lap and shoulder belt used improperly with child safety seat (specify): _____

(8) Other improper use of manual belt system (specify): _____

(9) Unknown _____

20. Manual (Active) Belt Failure Modes During Accident 1

- (0) No manual belt used
- (1) No manual belt failure(s)
- (2) Torn webbing (stretched webbing not included)
- (3) Broken buckle or latchplate
- (4) Upper anchorage separated
- (5) Other anchorage separated (specify): _____

(6) Broken retractor _____

(7) Combination of above (specify): _____

(8) Other manual belt failure (specify): _____

(9) Unknown _____

21. Air Bag System Availability/Function 1

- (0) Not equipped/not available
- (1) Air bag

Non-functional

(2) Air bag disconnected (specify): _____

(3) Air bag not reinstalled _____

(9) Unknown _____

22. Air Bag System Deployment 1

- (0) Not equipped/not available
- (1) Air bag deployed during accident (as a result of impact)
- (2) Air bag deployed inadvertently just prior to accident
- (3) Air bag deployed, accident sequence undetermined
- (4) Nondeployed
- (5) Unknown if deployed
- (6) Air bag deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)
- (9) Unknown

23. Are There Indications of Air Bag System Failure? 2

(0) Not equipped/not available

(1) No

(2) Yes (specify):

FAULTY INFLATOR

(9) Unknown _____

Note: See Variables 44 through 48 (Page 5) for Information on Automatic Belts

24. Police Reported Restraint Use 4

- (0) None used
- (1) Police did not indicate restraint use
- (2) Shoulder belt
- (3) Lap belt
- (4) Lap and shoulder belt
- (5) Belt used, type not specified
- (6) Child safety seat
- (7) Other or automatic restraint (specify): _____

(8) Restrained, type unknown _____

(9) Police indicated "unknown" _____

HEAD RESTRAINT AND SEAT EVALUATION

25. Head Restraint Type/Damage by Occupant
at This Occupant Position3

- (0) No head restraints
- (1) Integral—no damage
- (2) Integral—damaged during accident
- (3) Adjustable—no damage
- (4) Adjustable—damaged during accident
- (5) Add-on—no damage
- (6) Add-on—damaged during accident
- (8) Other (specify): _____

(9) Unknown

26. Seat Type (this Occupant Position)

6

- (00) Occupant not seated or no seat
- (01) Bucket
- (02) Bucket with folding back
- (03) Bench
- (04) Bench with separate back cushions
- (05) Bench with folding back(s)
- (06) Split bench with separate back cushions
- (07) Split bench with folding back(s)
- (08) Pedestal (i.e., column supported)
- (09) Other seat type (specify): _____

(10) Box mounted seat (i.e., van type)

(99) Unknown

27. Seat Performance (this Occupant Position)

1

- (0) Occupant not seated or no seat
- (1) No seat performance failure(s)
- (2) Seat adjusters failed
- (3) Seat back folding locks or "seat back" failed
- (4) Seat track/anchors failed
- (5) Deformed by impact of occupant
- (6) Deformed by passenger compartment intrusion (specify): _____

(7) Combination of above (specify): _____

(8) Other (specify): _____

(9) Unknown

CHILD SAFETY SEAT

28. Child Safety Seat Make/Model φ φ φ
 (000) No child safety seat
 Applicable codes are found in your NASS CDS
 Data Collection, Coding and Editing
 (950) Built-in child safety seat
 (997) Other make/model (specify):

(998) Unknown make/model
 (999) Unknown if child safety seat used

29. Type of Child Safety Seat φ
 (0) No child safety seat
 (1) Infant seat
 (2) Toddler seat
 (3) Convertible seat
 (4) Booster seat
 (7) Other type child safety seat (specify):

(8) Unknown child safety seat type
 (9) Unknown if child safety seat used

30. Child Safety Seat Orientation φ φ
 (00) No child safety seat

Designed for Rear Facing for This Age/Weight

(01) Rear facing
 (02) Forward facing
 (08) Other orientation (specify):

(09) Unknown orientation

Designed For Forward Facing for This Age/Weight

(11) Rear facing
 (12) Forward facing
 (18) Other orientation (specify):

(19) Unknown orientation

Unknown Design or Orientation For This Age/Weight, or Unknown Age/Weight

(21) Rear facing
 (22) Forward facing
 (28) Other orientation (specify):

(29) Unknown orientation

(99) Unknown if child safety seat used

31. Child Safety Seat Harness Usage φ φ

32. Child Safety Seat Shield Usage φ φ

33. Child Safety Seat Tether Usage φ φ

Note: Options below applicable to
 Variables OA31-OA33.

(00) No child safety seat

Not Designed With Harness/Shield/Tether

(01) After market harness/shield/tether
 added, not used
 (02) After market harness/shield/tether used
 (03) Child safety seat used, but no after market
 harness/shield/tether added
 (09) Unknown if harness/shield/tether
 added or used

Designed With Harness/Shield/Tether

(11) Harness/shield/tether not used
 (12) Harness/shield/tether used
 (19) Unknown if harness/shield/tether used

Unknown If Designed With Harness/Shield/Tether

(21) Harness/shield/tether not used
 (22) Harness/shield/tether used
 (29) Unknown if harness/shield/tether used

(99) Unknown if child safety seat used

INJURY CONSEQUENCES34. Injury Severity (Police Rating) 3

- (0) O - No injury
- (1) C - Possible injury
- (2) B - Nonincapacitating injury
- (3) A - Incapacitating injury
- (4) K - Killed
- (5) U - Injury, severity unknown
- (6) Died prior to accident
- (9) Unknown

35. Treatment - Mortality 3

- (0) No treatment
- (1) Fatal
- (2) Fatal - ruled disease (specify):

Nonfatal

- (3) Hospitalization
- (4) Transported and released
- (5) Treatment at scene - nontransported
- (6) Treatment later
- (8) Treatment - other (specify):

- (9) Unknown

36. Type Of Medical Facility (for Initial Treatment) 2

- (0) Not treated at a medical facility
- (1) Trauma center
- (2) Hospital
- (3) Medical clinic
- (4) Physician's office
- (5) Treatment later at medical facility
- (8) Other (specify):

- (9) Unknown

37. Hospital Stay 9 9

- (00) Not Hospitalized
- _____ Code the number of days (up through 60) that the occupant stayed in hospital.
- (61) 61 days or more
- (99) Unknown

99. Case Occupant 1

- (0) Not the Case Occupant
- (1) This is the Case Occupant
- (2) This is the Case Occupant in another case.

38. Working Days Lost 2 9

- _____ Code the number of days (up through 60) that the occupant lost from work due to the accident
- (00) No working days lost
- (61) 61 days or more
- (62) Fatally injured
- (97) Not working prior to accident
- (99) Unknown

STOP - GO TO VARIABLE 44 ON PAGE 7**VARIABLES 39 THROUGH 43 ARE COMPLETED BY THE ZONE CENTER**39. Time to Death φ φ

- _____ Code number of hours from time of accident to time of death up through 24 hours. If time of death is greater than 24 hours, code number of days. (Note: 1 day = 31, 2 days = 32, ... n days = 30 + n up through 30 days = 60)
- (00) Not fatal
- (96) Fatal - ruled disease
- (99) Unknown

40. 1st Medically Reported Cause of Death φ φ41. 2nd Medically Reported Cause of Death φ φ42. 3rd Medically Reported Cause of Death φ φ

- _____ Code the Occupant Injury from line number(s) for the medically reported injury(s) which reportedly contributed to this occupant's death
- (00) Not fatal or no additional causes
- (96) Mode of death given but specific injuries are not linked to cause of death. (specify):

(97) Other result (includes fatal ruled disease) (specify):

(99) Unknown

43. Number of Recorded Injuries for This Occupant φ 6

- _____ Code the actual number of injuries recorded for this occupant.
- (00) No recorded injuries
- (97) Injured, details unknown
- (99) Unknown if injured

AUTOMATIC BELT SYSTEM44. Automatic (Passive) Belt System Availability/ Function ϕ

- (0) Not equipped/not available
- (1) 2 point automatic belts
- (2) 3 point automatic belts
- (3) Automatic belts - type unknown

Non-functional

- (4) Automatic belts destroyed or rendered inoperative
- (9) Unknown

45. Automatic (Passive) Belt System Use ϕ

- (0) Not equipped/not available/destroyed or rendered inoperative
- (1) Automatic belt in use
- (2) Automatic belt not in use (manually disconnected, motorized track inoperative) (specify): _____

- (3) Automatic belt use unknown
- (9) Unknown

46. Automatic (Passive) Belt System Type ϕ

- (0) Not equipped/not available
- (1) Non-motorized system
- (2) Motorized system
- (9) Unknown

47. Proper Use of Automatic (Passive) Belt System ϕ

- (0) Not equipped/not available/not used
- (1) Automatic belt used properly
- (2) Automatic belt used properly with child safety seat

Automatic Belt Used Improperly

- (3) Automatic shoulder belt worn under arm
- (4) Automatic shoulder belt worn behind back
- (5) Automatic belt worn around more than one person
- (6) Lap portion of automatic belt worn on abdomen
- (7) Automatic lap and shoulder belt or automatic shoulder belt used improperly with child safety seat (specify): _____

- (8) Other improper use of automatic belt system (specify): _____
- (9) Unknown

48. Automatic (Passive) Belt Failure Modes During Accident ϕ

- (0) Not equipped/not available/not in use
- (1) No automatic belt failure(s)
- (2) Torn webbing (stretched webbing not included)
- (3) Broken buckle or latchplate
- (4) Upper anchorage separated
- (5) Other anchorage separated (specify): _____

- (6) Broken retractor
- (7) Combination of above (specify): _____
- (8) Other automatic belt failure (specify): _____

- (9) Unknown

49. Seat Orientation (this Occupant Position) 1

- (0) Occupant not seated or no seat
- (1) Forward facing seat
- (2) Rear facing seat
- (3) Side facing seat (inward)
- (4) Side facing seat (outward)
- (8) Other (specify): _____

- (9) Unknown

STOP - VARIABLES 50 THROUGH 52 ARE COMPLETED BY THE ZONE CENTER

TRAUMA DATA50. Glasgow Coma Scale (GCS) Score 9 7
(at Medical Facility)

- (00) Not injured
- (01) Injured - not treated at medical facility
- (02) No GCS Score at medical facility
- (03-15) Code the actual value of the initial GCS Score recorded at medical facility.
- (97) Injured, details unknown
- (99) Unknown if injured

51. Was the Occupant Given Blood? 9

- (1) No - blood not given
- (2) Yes - blood given (specify units): _____
- (9) Unknown if blood given

52. Arterial Blood Gases (ABG) - HCO₃ 9 7

- (00) Not injured
- (01) Injured, ABGs not measured or reported
- (02-50) Code the actual value of the HCO₃
- (96) ABGs reported, HCO₃ unknown
- (97) Injured, details unknown
- (99) Unknown if injured

ARE ALL APPLICABLE MEDICAL RECORDS INCLUDED WITH INITIAL SUBMISSION?

NO [X] YES []

UPDATE CANDIDATE?

NO [X] YES []



U.S. Department of Transportation
National Highway Traffic Safety
Administration

OCCUPANT INJURY FORM

Form Approved
O.M.B. No. 2127-0021
NATIONAL ACCIDENT SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM

1. Primary Sampling Unit Number _____	3. Vehicle Number <u> 01 </u>
2. Case Number - Stratum <u>DSI-93-AB-013</u>	4. Occupant Number <u> 01 </u>

INJURY DATA

Record below the actual injuries sustained by this occupant that were identified from the official and unofficial data sources. Remember not to double count an injury just because it was identified from two different sources. If greater than ten injuries have been documented, encode the balance on the Occupant Injury Supplement.

	Source of Injury Data	O.I.C.-A.I.S					Injury Source	Injury Confidence Level	Direct/ Indirect Injury	Occupant Area Intrusion Number	ICD-9	
		Body Region	Type of Anatomic Structure	Specific Anatomic Structure	Level of Injury	A.I.S. Severity						Aspect
1st	5. <u>7</u>	6. <u>2</u>	7. <u>9</u>	8. <u>2</u> <u>0</u>	9. <u>0</u> <u>0</u>	10. <u>1</u>	11. <u>2</u>	12. <u>4</u> <u>5</u>	13. <u>1</u>	14. <u>3</u>	15. <u>0</u> <u>0</u>	
2nd	16. <u>1</u>	17. <u>2</u>	18. <u>9</u>	19. <u>2</u> <u>0</u>	20. <u>0</u> <u>0</u>	21. <u>1</u>	22. <u>2</u>	23. <u>4</u> <u>5</u>	24. <u>1</u>	25. <u>3</u>	26. <u>0</u> <u>0</u>	
3rd	27. <u>1</u>	28. <u>3</u>	29. <u>9</u>	30. <u>2</u> <u>0</u>	31. <u>0</u> <u>0</u>	32. <u>1</u>	33. <u>9</u>	34. <u>4</u> <u>5</u>	35. <u>1</u>	36. <u>3</u>	37. <u>0</u> <u>0</u>	
4th	38. <u>1</u>	39. <u>4</u>	40. <u>9</u>	41. <u>2</u> <u>0</u>	42. <u>0</u> <u>0</u>	43. <u>1</u>	44. <u>9</u>	45. <u>4</u> <u>5</u>	46. <u>1</u>	47. <u>3</u>	48. <u>0</u> <u>0</u>	
5th	49. <u>1</u>	50. <u>7</u>	51. <u>9</u>	52. <u>2</u> <u>0</u>	53. <u>0</u> <u>0</u>	54. <u>1</u>	55. <u>2</u>	56. <u>4</u> <u>5</u>	57. <u>1</u>	58. <u>3</u>	59. <u>0</u> <u>0</u>	
6th	60. <u>1</u>	61. <u>7</u>	62. <u>9</u>	63. <u>2</u> <u>0</u>	64. <u>0</u> <u>0</u>	65. <u>1</u>	66. <u>2</u>	67. <u>4</u> <u>5</u>	68. <u>1</u>	69. <u>3</u>	70. <u>0</u> <u>0</u>	
7th	71. ____	72. ____	73. ____	74. ____	75. ____	76. ____	77. ____	78. ____	79. ____	80. ____	81. ____	
8th	82. ____	83. ____	84. ____	85. ____	86. ____	87. ____	88. ____	89. ____	90. ____	91. ____	92. ____	
9th	93. ____	94. ____	95. ____	96. ____	97. ____	98. ____	99. ____	100. ____	101. ____	102. ____	103. ____	
10th	104. ____	105. ____	106. ____	107. ____	108. ____	109. ____	110. ____	111. ____	112. ____	113. ____	114. ____	

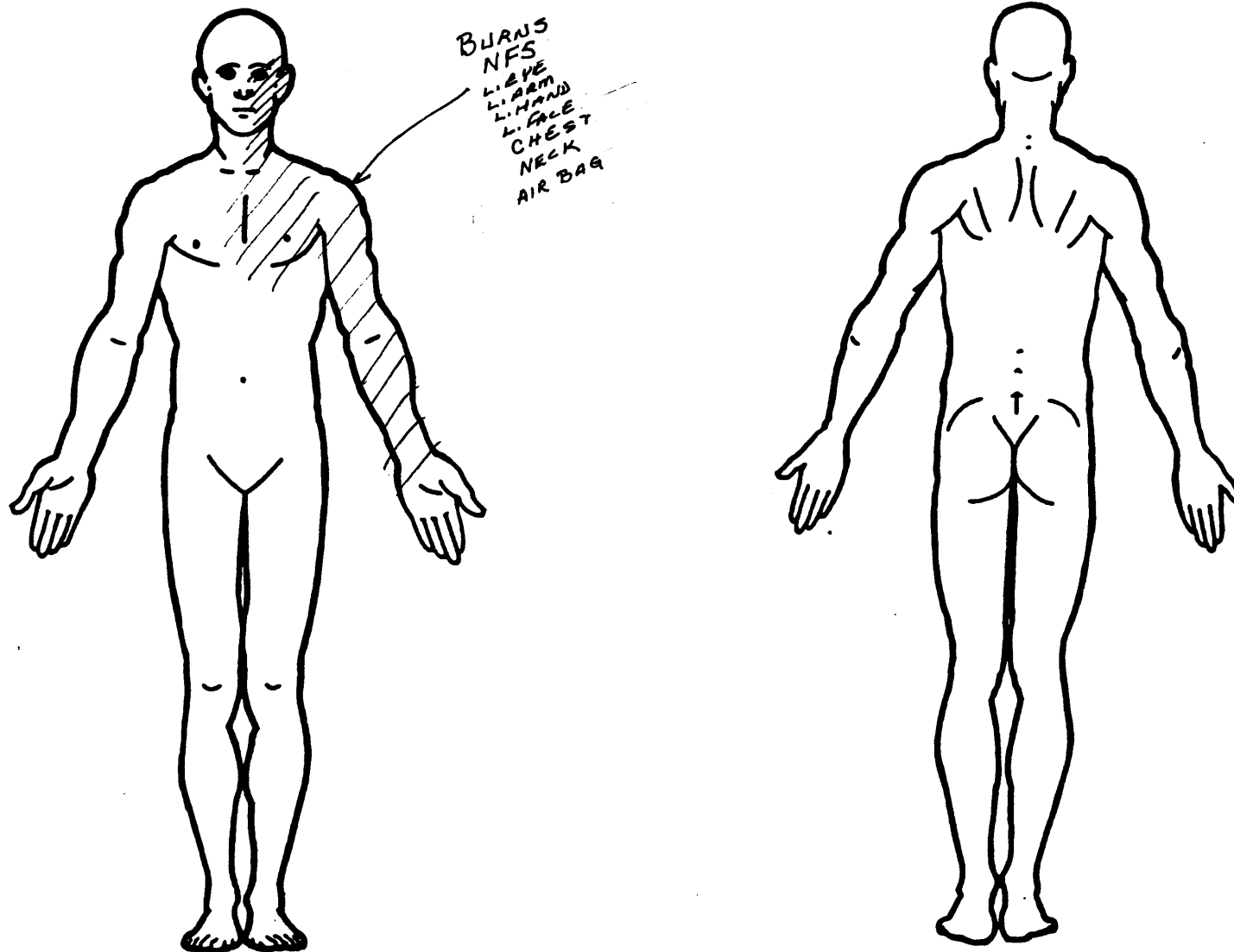
OCCUPANT INJURY DATA

Source of Injury Data	O.I.C.-A.I.S.				Level of Injury	A.I.S. Severity	Aspect	Injury Source	Injury Source Confidence Level	Direct/ Indirect Injury	Occupant Area Intrusion Number
	Body Region	Type of Anatomic Structure	Specific Anatomic Structure								
11th	---	---	---	---	---	---	---	---	---	---	---
12th	---	---	---	---	---	---	---	---	---	---	---
13th	---	---	---	---	---	---	---	---	---	---	---
14th	---	---	---	---	---	---	---	---	---	---	---
15th	---	---	---	---	---	---	---	---	---	---	---
16th	---	---	---	---	---	---	---	---	---	---	---
17th	---	---	---	---	---	---	---	---	---	---	---
18th	---	---	---	---	---	---	---	---	---	---	---
19th	---	---	---	---	---	---	---	---	---	---	---
20th	---	---	---	---	---	---	---	---	---	---	---
21st	---	---	---	---	---	---	---	---	---	---	---
22nd	---	---	---	---	---	---	---	---	---	---	---
23rd	---	---	---	---	---	---	---	---	---	---	---
24th	---	---	---	---	---	---	---	---	---	---	---
25th	---	---	---	---	---	---	---	---	---	---	---

ICD-9

OFFICIAL INJURY DATA — SOFT TISSUE INJURIES

Indicate the Location, Specific Anatomic Structure, Detail (size, depth, fracture type, head injury clinical signs and neurological deficits), and Source of all injuries indicated by official sources (or from PAR or other unofficial sources if medical records and interviewee data are unavailable.)



SOURCE OF INJURY DATA

OFFICIAL

- (1) Autopsy records with or without hospital/medical records
- (2) Hospital/medical records other than emergency room (e.g., discharge summary)
- (3) Emergency room records only (including associated X-rays or other lab reports)
- (4) Private physician, walk-in or emergency clinic

UNOFFICIAL

- (5) Lay coroner report
- (6) E.M.S. personnel
- (7) Interviewee
- (8) Other source (specify): _____

- (9) Police

INJURY SOURCE

FRONT

- (01) Windshield
- (02) Mirror
- (03) Sunvisor
- (04) Steering wheel rim
- (05) Steering wheel hub/spoke
- (06) Steering wheel (combination of codes 04 and 05)
- (07) Steering column, transmission selector lever, other attachment
- (08) Add on equipment (e.g., CB, tape deck, air conditioner)
- (09) Left instrument panel and below
- (10) Center instrument panel and below
- (11) Right instrument panel and below
- (12) Glove compartment door
- (13) Knee bolster
- (14) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, mirror, or steering assembly (driver side only)
- (15) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, or mirror (passenger side only)
- (16) Driver side air bag compartment cover
- (17) Passenger side air bag compartment cover
- (18) Windshield reinforced by exterior object (specify): _____
- (19) Other front object (specify): _____

LEFT SIDE

- (20) Left side interior surface, excluding hardware or armrests
- (21) Left side hardware or armrest
- (22) Left A (A1/A2)-pillar
- (23) Left B-pillar
- (24) Other left pillar (specify): _____

- (25) Left side window glass or frame
- (26) Left side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B-pillar, or roof side rail.
- (27) Other left side object (specify): _____

- (28) Left side window sill

RIGHT SIDE

- (30) Right side interior surface, excluding hardware or armrests
- (31) Right side hardware or armrest
- (32) Right A (A1/A2)-pillar
- (33) Right B-pillar
- (34) Other right pillar (specify): _____
- (35) Right side window glass or frame
- (36) Right side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B-pillar, or roof side rail.
- (37) Other right side object (specify): _____

- (38) Right side window sill

INTERIOR

- (40) Seat, back support
- (41) Belt restraint webbing/buckle
- (42) Belt restraint B-pillar or door frame attachment point
- (43) Other restraint system component (specify): _____
- (44) Head restraint system
- (45) Air bag (use codes "16" and "17" for injuries sustained from air bag compartment covers)
- (46) Other occupants (specify): _____
- (47) Interior loose objects
- (48) Child safety seat (specify): _____
- (49) Other interior object (specify): _____

ROOF

- (50) Front header
- (51) Rear header
- (52) Roof left side rail
- (53) Roof right side rail
- (54) Roof or convertible top

FLOOR

- (56) Floor (including toe pan)
- (57) Floor or console mounted transmission lever, including console
- (58) Parking brake handle
- (59) Foot controls including parking brake

REAR

- (60) Backlight (rear window)

- (61) Backlight storage rack, door, etc.
- (62) Other rear object (specify): _____

EXTERIOR OF OCCUPANT'S VEHICLE

- (65) Hood
- (66) Outside hardware (e.g., outside mirror, antenna)
- (67) Other exterior surface or tires (specify): _____
- (68) Unknown exterior objects

EXTERIOR OF OTHER MOTOR VEHICLE

- (70) Front bumper
- (71) Hood edge
- (72) Other front of vehicle (specify): _____
- (73) Hood
- (74) Hood ornament
- (75) Windshield, roof rail, A-pillar
- (76) Side surface
- (77) Side mirrors
- (78) Other side protrusions (specify): _____

- (79) Rear surface
- (80) Undercarriage
- (81) Tires and wheels
- (82) Other exterior of other motor vehicle (specify): _____

- (83) Unknown exterior of other motor vehicle

OTHER VEHICLE OR OBJECT IN THE ENVIRONMENT

- (84) Ground
- (85) Other vehicle or object (specify): _____
- (86) Unknown vehicle or object

NONCONTACT INJURY

- (90) Fire in vehicle
- (91) Flying glass
- (92) Other noncontact injury source (specify): _____
- (93) Air bag exhaust gases
- (97) Injured, unknown source

INJURY SOURCE CONFIDENCE LEVEL

- (1) Certain
- (2) Probable
- (3) Possible
- (9) Unknown

DIRECT/INDIRECT INJURY

- (1) Direct contact injury
- (2) Indirect contact injury
- (3) Noncontact injury
- (7) Injured, unknown source

OCCUPANT INJURY CLASSIFICATION

Body Region

- (1) Head
- (2) Face
- (3) Neck
- (4) Thorax
- (5) Abdomen
- (6) Spine
- (7) Upper Extremity
- (8) Lower Extremity
- (9) Unspecified

Type of Anatomic Structure

- (1) Whole Area
- (2) Vessels
- (3) Nerves
- (4) Organs (includes muscles/ligaments)
- (5) Skeletal (includes joints)
- (6) Head - LOC
- (9) Skin

Specific Anatomic Structure

Whole Area

- (02) Skin - Abrasion
- (04) Skin - Contusion
- (06) Skin - Laceration
- (08) Skin - Avulsion
- (10) Amputation
- (20) Burn
- (30) Crush
- (40) Degloving
- (50) Injury - NFS
- (90) Trauma, other than mechanical

Head - LOC

- (02) Length of LOC
- (04, 06, 08) Level of Consciousness
- (10) Concussion

Spine

- (02) Cervical
- (04) Thoracic
- (06) Lumbar

Vessels, Nerves, Organs, Bones, Joints are assigned consecutive two digit numbers beginning with 02

Level of Injury

Specific injuries are assigned consecutive two-digit numbers beginning with 02.

To the extent possible, within the organizational framework of the AIS, 00 is assigned to an injury NFS as to severity or where only one injury is given in the dictionary for that anatomic structure. 99 is assigned to any injury NFS as to lesion or severity.

Abbreviated Injury Scale

- (1) Minor injury
- (2) Moderate injury
- (3) Serious injury
- (4) Severe injury
- (5) Critical injury
- (6) Maximum (untreatable)
- (7) Injured, unknown severity

Aspect

- (1) Right
- (2) Left
- (3) Bilateral
- (4) Central
- (5) Anterior
- (6) Posterior
- (7) Superior
- (8) Inferior
- (9) Unknown
- (0) Whole region

OFFICIAL INJURY DATA — SKELETAL INJURIES

Restrained?

___ No

___ Yes

Blood Alcohol
Level (mg/dl)

BAL = ___

Glasgow Coma
Scale Score

GCSS = ___

Units of Blood
Given

Units = ___

Arterial Blood
Gases

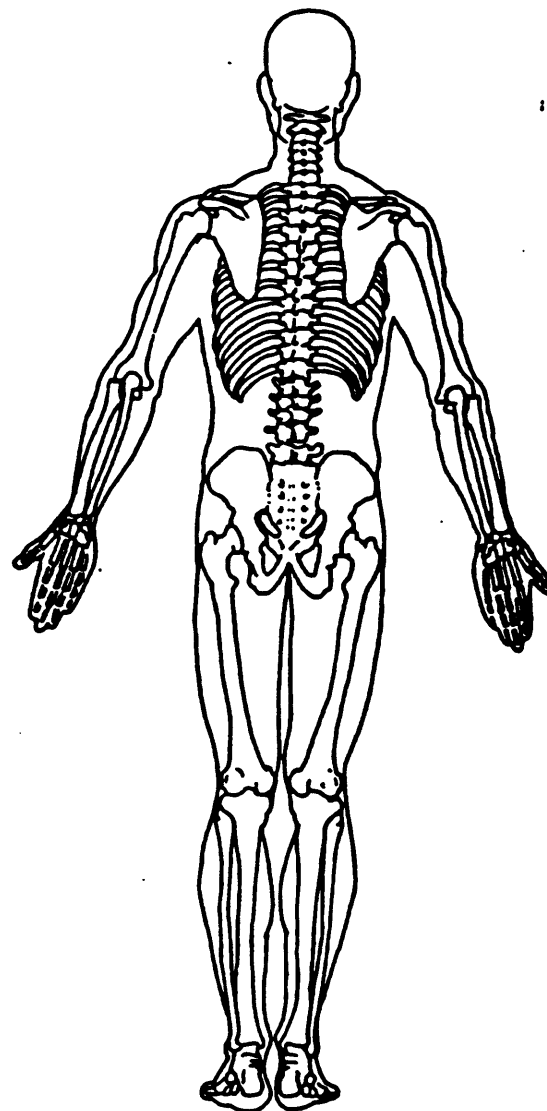
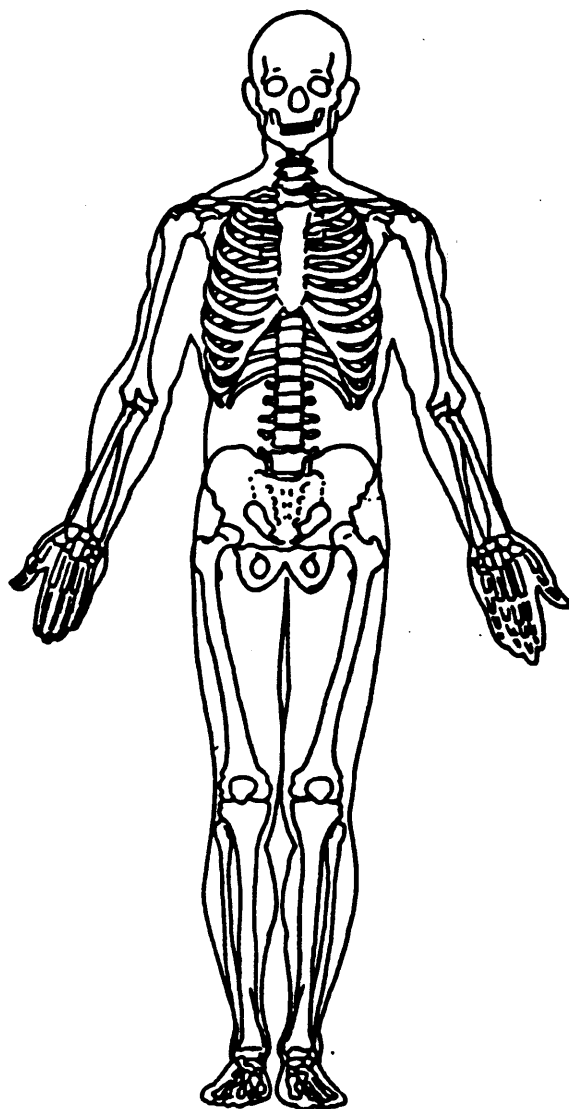
pH = ___

PO₂ = ___

PCO₂ = ___

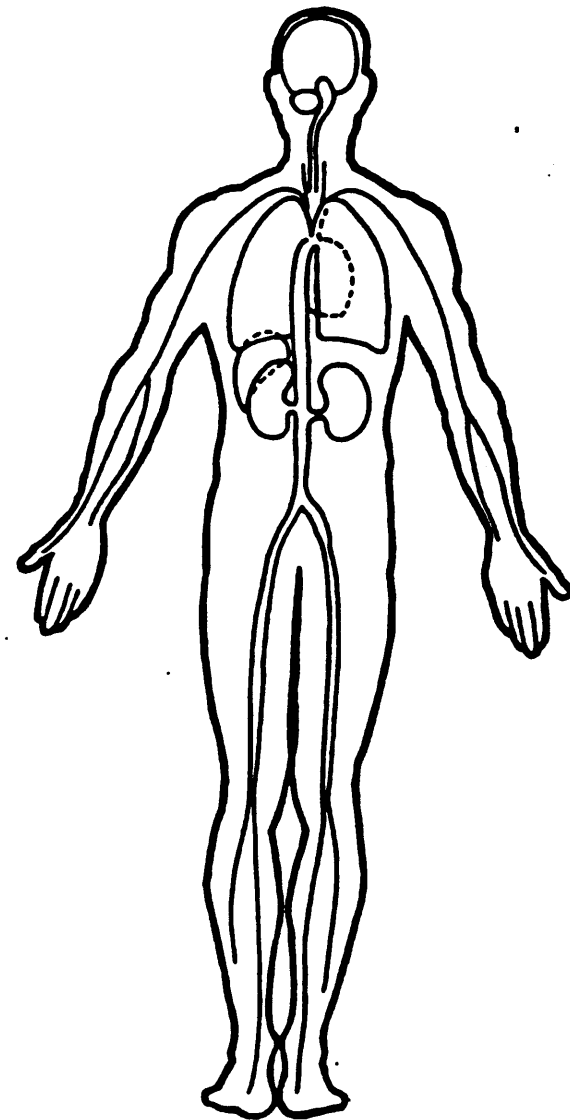
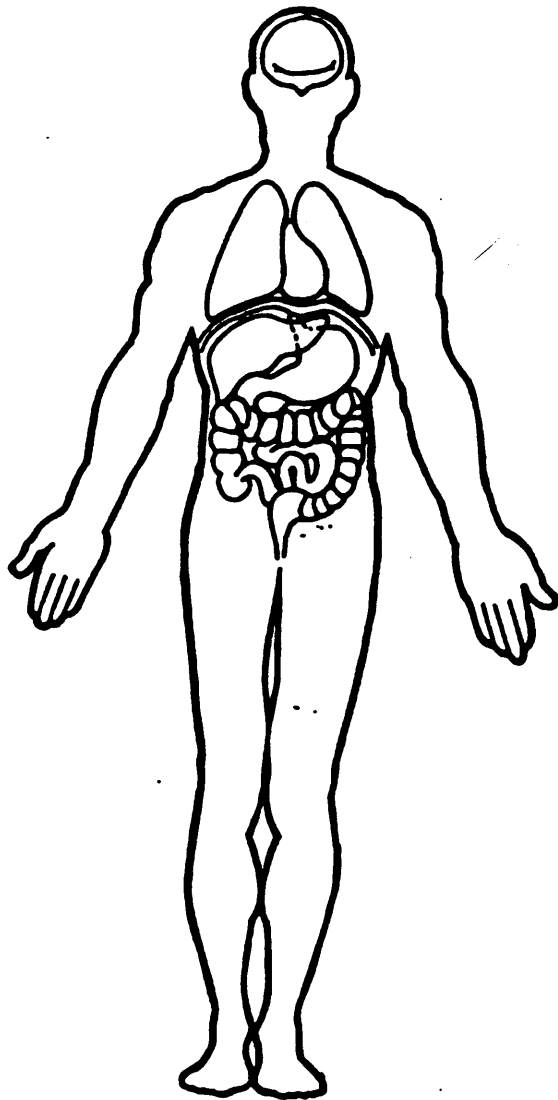
HCO₃ = ___

Indicate the Location, Specific Anatomic Structure, Detail (size, depth, fracture type, head injury clinical signs and neurological deficits), and Source of all injuries indicated by official sources (or from PAR or other unofficial sources if medical records and interviewee data are unavailable.)



OFFICIAL INJURY DATA — INTERNAL INJURIES

Indicate the Location, Specific Anatomic Structure, Detail (size, depth, fracture type, head injury clinical signs and neurological deficits), and Source of all injuries indicated by official sources (or from PAR or other unofficial sources if medical records and interviewee data are unavailable.)





OCCUPANT ASSESSMENT FORM

1. Primary Sampling Unit Number _____
2. Case Number - Stratum DSI-93-AB-013
3. Vehicle Number 01
4. Occupant Number 02

OCCUPANT'S CHARACTERISTICS

5. Occupant's Age 13
Code actual age at time of accident.
(00) Less than one year old (specify by month): _____
(97) 97 years and older _____
(99) Unknown
6. Occupant's Sex 2
(1) Male
(2) Female
(9) Unknown
7. Occupant's Height 999
Code actual height to the nearest
centimeter.
(999) Unknown
_____ inches X 2.54 = _____ centimeters
8. Occupant's Weight 999
Code actual weight to the nearest
kilogram.
(999) Unknown
_____ pounds X .4536 = _____ kilograms
9. Occupant's Role 2
(1) Driver
(2) Passenger
(9) Unknown

OCCUPANT'S SEATING

10. Occupant's Seat Position 13
Front Seat
(11) Left side
(12) Middle
(13) Right side
(14) Other (specify): _____
(15) On or in the lap of another occupant
- Second Seat*
(21) Left side
(22) Middle
(23) Right side
(24) Other (specify): _____
(25) On or in the lap of another occupant
- Third Seat*
(31) Left side
(32) Middle
(33) Right side
(34) Other (specify): _____
(35) On or in the lap of another occupant
- Fourth Seat*
(41) Left side
(42) Middle
(43) Right side
(44) Other (specify): _____
(45) On or in the lap of another occupant
- (97) In or on unenclosed area
(98) Other seat (specify): _____
(99) Unknown
11. Occupant's Posture 0
(0) Normal posture
- Abnormal posture*
(1) Kneeling or standing on seat
(2) Lying on or across seat
(3) Kneeling, standing or sitting in front of seat
(4) Sitting sideways or turned to talk with another occupant or to look out a rear window
(5) Sitting on a console
(6) Lying back in a reclined seat position
(7) Bracing with feet or hands on a surface in front of seat
(8) Other abnormal posture (specify): _____
(9) Unknown

EJECTION/ENTRAPMENT

12. Ejection ϕ

- (0) No ejection
- (1) Complete ejection
- (2) Partial ejection
- (3) Ejection, unknown degree
- (9) Unknown

13. Ejection Area ϕ

- (0) No ejection
- (1) Windshield
- (2) Left front
- (3) Right front
- (4) Left rear
- (5) Right rear
- (6) Rear
- (7) Roof
- (8) Other area (e.g., back of pickup, etc.)
(specify): _____
- (9) Unknown

14. Ejection Medium ϕ

- (0) No ejection
- (1) Door/hatch/tailgate
- (2) Nonfixed roof structure
- (3) Fixed glazing
- (4) Nonfixed glazing (specify): _____
- (5) Integral structure
- (8) Other medium (specify): _____
- (9) Unknown

15. Medium Status (Immediately Prior To Impact) ϕ

- (0) No ejection
- (1) Open
- (2) Closed
- (3) Integral structure
- (9) Unknown

16. Entrapment ϕ

- (NOTE: Entrapped means that part of the person was in the vehicle and mechanically restrained; jammed doors and immobilizing injuries by themselves are not sufficient to constitute entrapment.)
- (0) Not entrapped
 - (1) Entrapped
 - (9) Unknown

RESTRAINT SYSTEM EVALUATION

17. Manual (Active) Belt System Availability 4

- (0) None available
- (1) Belt removed/destroyed
- (2) Shoulder belt
- (3) Lap belt
- (4) Lap and shoulder belt
- (5) Belt available—type unknown

Integral Belt Partially Destroyed

- (6) Shoulder belt (lap belt destroyed/removed)
- (7) Lap belt (shoulder belt destroyed/removed)

(8) Other belt (specify): _____

(9) Unknown _____

18. Manual (Active) Belt System Use φ 4

- (00) None used, not available, or belt removed/destroyed
- (01) Inoperative (specify): _____

(02) Shoulder belt _____

(03) Lap belt _____

(04) Lap and shoulder belt _____

(05) Belt used—type unknown _____

(08) Other belt used (specify): _____

(12) Shoulder belt used with child safety seat _____

(13) Lap belt used with child safety seat _____

(14) Lap and shoulder belt used with child safety seat _____

(15) Belt used with child safety seat—type unknown _____

(18) Other belt used with child safety seat (specify): _____

(99) Unknown if belt used _____

19. Proper Use of Manual (Active) Belts 1

- (0) None used or not available
- (1) Belt used properly
- (2) Belt used properly with child safety seat

Belt Used Improperly

- (3) Shoulder belt worn under arm
- (4) Shoulder belt worn behind back or seat
- (5) Belt worn around more than one person
- (6) Lap belt worn on abdomen
- (7) Lap belt or lap and shoulder belt used improperly with child safety seat (specify): _____

(8) Other improper use of manual belt system (specify): _____

(9) Unknown _____

20. Manual (Active) Belt Failure Modes During Accident 1

- (0) No manual belt used
- (1) No manual belt failure(s)
- (2) Torn webbing (stretched webbing not included)
- (3) Broken buckle or latchplate
- (4) Upper anchorage separated
- (5) Other anchorage separated (specify): _____

(6) Broken retractor _____

(7) Combination of above (specify): _____

(8) Other manual belt failure (specify): _____

(9) Unknown _____

21. Air Bag System Availability/Function φ

- (0) Not equipped/not available
- (1) Air bag

Non-functional

(2) Air bag disconnected (specify): _____

(3) Air bag not reinstalled _____

(9) Unknown _____

22. Air Bag System Deployment φ

- (0) Not equipped/not available
- (1) Air bag deployed during accident (as a result of impact)
- (2) Air bag deployed inadvertently just prior to accident
- (3) Air bag deployed, accident sequence undetermined
- (4) Nondeployed
- (5) Unknown if deployed
- (6) Air bag deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)
- (9) Unknown

23. Are There Indications of Air Bag System Failure? φ

- (0) Not equipped/not available
- (1) No
- (2) Yes (specify): _____

(9) Unknown _____

Note: See Variables 44 through 48 (Page 5) for Information on Automatic Belts

24. Police Reported Restraint Use 4

- (0) None used
- (1) Police did not indicate restraint use
- (2) Shoulder belt
- (3) Lap belt
- (4) Lap and shoulder belt
- (5) Belt used, type not specified
- (6) Child safety seat
- (7) Other or automatic restraint (specify): _____

(8) Restrained, type unknown _____

(9) Police indicated "unknown" _____

HEAD RESTRAINT AND SEAT EVALUATION

25. Head Restraint Type/Damage by Occupant
at This Occupant Position3

- (0) No head restraints
- (1) Integral—no damage
- (2) Integral—damaged during accident
- (3) Adjustable—no damage
- (4) Adjustable—damaged during accident
- (5) Add-on—no damage
- (6) Add-on—damaged during accident
- (8) Other (specify): _____
- (9) Unknown

26. Seat Type (this Occupant Position)

6

- (00) Occupant not seated or no seat
- (01) Bucket
- (02) Bucket with folding back
- (03) Bench
- (04) Bench with separate back cushions
- (05) Bench with folding back(s)
- (06) Split bench with separate back cushions
- (07) Split bench with folding back(s)
- (08) Pedestal (i.e., column supported)
- (09) Other seat type (specify): _____
- (10) Box mounted seat (i.e., van type)
- (99) Unknown

27. Seat Performance (this Occupant Position)

1

- (0) Occupant not seated or no seat
- (1) No seat performance failure(s)
- (2) Seat adjusters failed
- (3) Seat back folding locks or "seat back" failed
- (4) Seat track/anchors failed
- (5) Deformed by impact of occupant
- (6) Deformed by passenger compartment intrusion (specify): _____

(7) Combination of above (specify): _____

(8) Other (specify): _____

(9) Unknown

CHILD SAFETY SEAT

28. Child Safety Seat Make/Model φ φ φ
 (000) No child safety seat
 Applicable codes are found in your NASS CDS
 Data Collection, Coding and Editing
 (950) Built-in child safety seat
 (997) Other make/model (specify):

(998) Unknown make/model
 (999) Unknown if child safety seat used

29. Type of Child Safety Seat φ
 (0) No child safety seat
 (1) Infant seat
 (2) Toddler seat
 (3) Convertible seat
 (4) Booster seat
 (7) Other type child safety seat (specify):
 (8) Unknown child safety seat type
 (9) Unknown if child safety seat used

30. Child Safety Seat Orientation φ φ
 (00) No child safety seat

Designed for Rear Facing for This Age/Weight
 (01) Rear facing
 (02) Forward facing
 (08) Other orientation (specify):
 (09) Unknown orientation

Designed For Forward Facing for This Age/Weight
 (11) Rear facing
 (12) Forward facing
 (18) Other orientation (specify):

(19) Unknown orientation

*Unknown Design or Orientation For This
 Age/Weight, or Unknown Age/Weight*

(21) Rear facing
 (22) Forward facing
 (28) Other orientation (specify):

(29) Unknown orientation

(99) Unknown if child safety seat used

31. Child Safety Seat Harness Usage φ φ

32. Child Safety Seat Shield Usage φ φ

33. Child Safety Seat Tether Usage φ φ

Note: Options below applicable to
 Variables OA31-OA33.

(00) No child safety seat

Not Designed With Harness/Shield/Tether

(01) After market harness/shield/tether
 added, not used
 (02) After market harness/shield/tether used
 (03) Child safety seat used, but no after market
 harness/shield/tether added
 (09) Unknown if harness/shield/tether
 added or used

Designed With Harness/Shield/Tether

(11) Harness/shield/tether not used
 (12) Harness/shield/tether used
 (19) Unknown if harness/shield/tether used

Unknown If Designed With Harness/Shield/Tether

(21) Harness/shield/tether not used
 (22) Harness/shield/tether used
 (29) Unknown if harness/shield/tether used

(99) Unknown if child safety seat used

INJURY CONSEQUENCES34. Injury Severity (Police Rating) ϕ

- (0) O - No injury
- (1) C - Possible injury
- (2) B - Nonincapacitating injury
- (3) A - Incapacitating injury
- (4) K - Killed
- (5) U - Injury, severity unknown
- (6) Died prior to accident
- (9) Unknown

35. Treatment - Mortality ϕ

- (0) No treatment
- (1) Fatal
- (2) Fatal - ruled disease (specify):

Nonfatal

- (3) Hospitalization
- (4) Transported and released
- (5) Treatment at scene - nontransported
- (6) Treatment later
- (8) Treatment - other (specify):

- (9) Unknown

36. Type Of Medical Facility (for Initial Treatment) ϕ

- (0) Not treated at a medical facility
- (1) Trauma center
- (2) Hospital
- (3) Medical clinic
- (4) Physician's office
- (5) Treatment later at medical facility
- (8) Other (specify):

- (9) Unknown

37. Hospital Stay ϕ ϕ

- (00) Not Hospitalized
- _____ Code the number of days (up through 60) that the occupant stayed in hospital.
- (61) 61 days or more
- (99) Unknown

99. Case Occupant ϕ

- (0) Not the Case Occupant
- (1) This is the Case Occupant
- (2) This is the Case Occupant in another case.

38. Working Days Lost 2 1

- _____ Code the number of days (up through 60) that the occupant lost from work due to the accident
- (00) No working days lost
- (61) 61 days or more
- (62) Fatally injured
- (97) Not working prior to accident
- (99) Unknown

STOP - GO TO VARIABLE 44 ON PAGE 7**VARIABLES 39 THROUGH 43 ARE COMPLETED BY THE ZONE CENTER**39. Time to Death ϕ ϕ

- _____ Code number of hours from time of accident to time of death up through 24 hours. If time of death is greater than 24 hours, code number of days. (Note: 1 day = 31, 2 days = 32, ... n days = 30 + n up through 30 days = 60)
- (00) Not fatal
- (96) Fatal - ruled disease
- (99) Unknown

40. 1st Medically Reported Cause of Death ϕ ϕ41. 2nd Medically Reported Cause of Death ϕ ϕ42. 3rd Medically Reported Cause of Death ϕ ϕ

- _____ Code the Occupant Injury from line number(s) for the medically reported injury(s) which reportedly contributed to this occupant's death
- (00) Not fatal or no additional causes
- (96) Mode of death given but specific injuries are not linked to cause of death. (specify):

- (97) Other result (includes fatal ruled disease) (specify):

- (99) Unknown

43. Number of Recorded Injuries for This Occupant ϕ ϕ

- _____ Code the actual number of injuries recorded for this occupant.
- (00) No recorded injuries
- (97) Injured, details unknown
- (99) Unknown if injured

AUTOMATIC BELT SYSTEM44. Automatic (Passive) Belt System Availability/Function φ

- (0) Not equipped/not available
- (1) 2 point automatic belts
- (2) 3 point automatic belts
- (3) Automatic belts - type unknown

Non-functional

- (4) Automatic belts destroyed or rendered inoperative
- (9) Unknown

45. Automatic (Passive) Belt System Use φ

- (0) Not equipped/not available/destroyed or rendered inoperative
- (1) Automatic belt in use
- (2) Automatic belt not in use (manually disconnected, motorized track inoperative) (specify): _____
- (3) Automatic belt use unknown
- (9) Unknown

46. Automatic (Passive) Belt System Type φ

- (0) Not equipped/not available
- (1) Non-motorized system
- (2) Motorized system
- (9) Unknown

47. Proper Use of Automatic (Passive) Belt System φ

- (0) Not equipped/not available/not used
- (1) Automatic belt used properly
- (2) Automatic belt used properly with child safety seat

Automatic Belt Used Improperly

- (3) Automatic shoulder belt worn under arm
- (4) Automatic shoulder belt worn behind back
- (5) Automatic belt worn around more than one person
- (6) Lap portion of automatic belt worn on abdomen
- (7) Automatic lap and shoulder belt or automatic shoulder belt used improperly with child safety seat (specify): _____

- (8) Other improper use of automatic belt system (specify): _____
- (9) Unknown

48. Automatic (Passive) Belt Failure Modes During Accident φ

- (0) Not equipped/not available/not in use
- (1) No automatic belt failure(s)
- (2) Torn webbing (stretched webbing not included)
- (3) Broken buckle or latchplate
- (4) Upper anchorage separated
- (5) Other anchorage separated (specify): _____
- (6) Broken retractor
- (7) Combination of above (specify): _____
- (8) Other automatic belt failure (specify): _____
- (9) Unknown

49. Seat Orientation (this Occupant Position) 1

- (0) Occupant not seated or no seat
- (1) Forward facing seat
- (2) Rear facing seat
- (3) Side facing seat (inward)
- (4) Side facing seat (outward)
- (8) Other (specify): _____
- (9) Unknown

STOP - VARIABLES 50 THROUGH 52 ARE COMPLETED BY THE ZONE CENTER**TRAUMA DATA**50. Glasgow Coma Scale (GCS) Score φ φ
(at Medical Facility)

- (00) Not injured
- (01) Injured - not treated at medical facility
- (02) No GCS Score at medical facility
- (03-15) Code the actual value of the initial GCS Score recorded at medical facility.
- (97) Injured, details unknown
- (99) Unknown if injured

51. Was the Occupant Given Blood? 1

- (1) No - blood not given
- (2) Yes - blood given (specify units): _____
- (9) Unknown if blood given

52. Arterial Blood Gases (ABG) - HCO₃ φ φ

- (00) Not injured
- (01) Injured, ABGs not measured or reported
- (02-50) Code the actual value of the HCO₃
- (96) ABGs reported, HCO₃ unknown
- (97) Injured, details unknown
- (99) Unknown if injured

ARE ALL APPLICABLE MEDICAL RECORDS INCLUDED WITH INITIAL SUBMISSION?

NO [X] YES []

UPDATE CANDIDATE?

NO [X] YES []



OCCUPANT ASSESSMENT FORM

OCCUPANT'S SEATING

1. Primary Sampling Unit Number _____
2. Case Number - Stratum DSI-93-4B-013
3. Vehicle Number 01
4. Occupant Number 03

OCCUPANT'S CHARACTERISTICS

5. Occupant's Age 09
Code actual age at time of accident.
(00) Less than one year old (specify by month): _____
(97) 97 years and older
(99) Unknown
6. Occupant's Sex 2
(1) Male
(2) Female
(9) Unknown
7. Occupant's Height 999
Code actual height to the nearest
centimeter.
(999) Unknown

_____ inches X 2.54 = _____ centimeters
8. Occupant's Weight 999
Code actual weight to the nearest
kilogram.
(999) Unknown

_____ pounds X .4536 = _____ kilograms
9. Occupant's Role 2
(1) Driver
(2) Passenger
(9) Unknown

10. Occupant's Seat Position 2 1
Front Seat
(11) Left side
(12) Middle
(13) Right side
(14) Other (specify): _____
(15) On or in the lap of another occupant

- Second Seat*
(21) Left side
(22) Middle
(23) Right side
(24) Other (specify): _____
(25) On or in the lap of another occupant

- Third Seat*
(31) Left side
(32) Middle
(33) Right side
(34) Other (specify): _____
(35) On or in the lap of another occupant

- Fourth Seat*
(41) Left side
(42) Middle
(43) Right side
(44) Other (specify): _____
(45) On or in the lap of another occupant

- (97) In or on unenclosed area
(98) Other seat (specify): _____
(99) Unknown

11. Occupant's Posture 0
(0) Normal posture
- Abnormal posture*
(1) Kneeling or standing on seat
(2) Lying on or across seat
(3) Kneeling, standing or sitting in front of seat
(4) Sitting sideways or turned to talk with another occupant or to look out a rear window
(5) Sitting on a console
(6) Lying back in a reclined seat position
(7) Bracing with feet or hands on a surface in front of seat
(8) Other abnormal posture (specify): _____
(9) Unknown

EJECTION/ENTRAPMENT

12. Ejection φ

- (0) No ejection
- (1) Complete ejection
- (2) Partial ejection
- (3) Ejection, unknown degree
- (9) Unknown

13. Ejection Area φ

- (0) No ejection
- (1) Windshield
- (2) Left front
- (3) Right front
- (4) Left rear
- (5) Right rear
- (6) Rear
- (7) Roof
- (8) Other area (e.g., back of pickup, etc.)
(specify): _____
- (9) Unknown

14. Ejection Medium φ

- (0) No ejection
- (1) Door/hatch/tailgate
- (2) Nonfixed roof structure
- (3) Fixed glazing
- (4) Nonfixed glazing (specify): _____
- (5) Integral structure
- (8) Other medium (specify): _____
- (9) Unknown

15. Medium Status (Immediately Prior To Impact) φ

- (0) No ejection
- (1) Open
- (2) Closed
- (3) Integral structure
- (9) Unknown

16. Entrapment φ

(NOTE: Entrapped means that part of the person was in the vehicle and mechanically restrained; jammed doors and immobilizing injuries by themselves are not sufficient to constitute entrapment.)

- (0) Not entrapped
- (1) Entrapped
- (9) Unknown

RESTRAINT SYSTEM EVALUATION

17. Manual (Active) Belt System Availability 4

- (0) None available
- (1) Belt removed/destroyed
- (2) Shoulder belt
- (3) Lap belt
- (4) Lap and shoulder belt
- (5) Belt available—type unknown

Integral Belt Partially Destroyed

- (6) Shoulder belt (lap belt destroyed/removed)
- (7) Lap belt (shoulder belt destroyed/removed)

(8) Other belt (specify): _____

(9) Unknown _____

18. Manual (Active) Belt System Use φ 4

- (00) None used, not available, or belt removed/destroyed
- (01) Inoperative (specify): _____

(02) Shoulder belt _____

(03) Lap belt _____

(04) Lap and shoulder belt _____

(05) Belt used—type unknown _____

(08) Other belt used (specify): _____

(12) Shoulder belt used with child safety seat _____

(13) Lap belt used with child safety seat _____

(14) Lap and shoulder belt used with child safety seat _____

(15) Belt used with child safety seat—type unknown _____

(18) Other belt used with child safety seat (specify): _____

(99) Unknown if belt used _____

19. Proper Use of Manual (Active) Belts 1

- (0) None used or not available
- (1) Belt used properly
- (2) Belt used properly with child safety seat

Belt Used Improperly

- (3) Shoulder belt worn under arm
- (4) Shoulder belt worn behind back or seat
- (5) Belt worn around more than one person
- (6) Lap belt worn on abdomen
- (7) Lap belt or lap and shoulder belt used improperly with child safety seat (specify): _____

(8) Other improper use of manual belt system (specify): _____

(9) Unknown _____

20. Manual (Active) Belt Failure Modes During Accident 1

- (0) No manual belt used
- (1) No manual belt failure(s)
- (2) Torn webbing (stretched webbing not included)
- (3) Broken buckle or latchplate
- (4) Upper anchorage separated
- (5) Other anchorage separated (specify): _____

(6) Broken retractor _____

(7) Combination of above (specify): _____

(8) Other manual belt failure (specify): _____

(9) Unknown _____

21. Air Bag System Availability/Function φ

- (0) Not equipped/not available
- (1) Air bag

Non-functional

(2) Air bag disconnected (specify): _____

(3) Air bag not reinstalled _____

(9) Unknown _____

22. Air Bag System Deployment φ

- (0) Not equipped/not available
- (1) Air bag deployed during accident (as a result of impact)
- (2) Air bag deployed inadvertently just prior to accident
- (3) Air bag deployed, accident sequence undetermined
- (4) Nondeployed
- (5) Unknown if deployed
- (6) Air bag deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)
- (9) Unknown

23. Are There Indications of Air Bag System Failure? φ

- (0) Not equipped/not available

(1) No

(2) Yes (specify): _____

(9) Unknown _____

Note: See Variables 44 through 48 (Page 5) for Information on Automatic Belts

24. Police Reported Restraint Use 4

- (0) None used
- (1) Police did not indicate restraint use
- (2) Shoulder belt
- (3) Lap belt
- (4) Lap and shoulder belt
- (5) Belt used, type not specified
- (6) Child safety seat
- (7) Other or automatic restraint (specify): _____

(8) Restrained, type unknown _____

(9) Police indicated "unknown"

HEAD RESTRAINT AND SEAT EVALUATION

25. Head Restraint Type/Damage by Occupant
at This Occupant Position0

- (0) No head restraints
- (1) Integral—no damage
- (2) Integral—damaged during accident
- (3) Adjustable—no damage
- (4) Adjustable—damaged during accident
- (5) Add-on—no damage
- (6) Add-on—damaged during accident
- (8) Other (specify):

(9) Unknown

26. Seat Type (this Occupant Position)

03

- (00) Occupant not seated or no seat
- (01) Bucket
- (02) Bucket with folding back
- (03) Bench
- (04) Bench with separate back cushions
- (05) Bench with folding back(s)
- (06) Split bench with separate back cushions
- (07) Split bench with folding back(s)
- (08) Pedestal (i.e., column supported)
- (09) Other seat type (specify):

(10) Box mounted seat (i.e., van type)

(99) Unknown

27. Seat Performance (this Occupant Position)

1

- (0) Occupant not seated or no seat
- (1) No seat performance failure(s)
- (2) Seat adjusters failed
- (3) Seat back folding locks or "seat back" failed
- (4) Seat track/anchors failed
- (5) Deformed by impact of occupant
- (6) Deformed by passenger compartment intrusion (specify):

(7) Combination of above (specify):

(8) Other (specify):

(9) Unknown

CHILD SAFETY SEAT

28. Child Safety Seat Make/Model φ φ φ
 (000) No child safety seat
 Applicable codes are found in your NASS CDS
 Data Collection, Coding and Editing
 (950) Built-in child safety seat
 (997) Other make/model (specify):

(998) Unknown make/model
 (999) Unknown if child safety seat used

29. Type of Child Safety Seat φ
 (0) No child safety seat
 (1) Infant seat
 (2) Toddler seat
 (3) Convertible seat
 (4) Booster seat
 (7) Other type child safety seat (specify):

 (8) Unknown child safety seat type
 (9) Unknown if child safety seat used

30. Child Safety Seat Orientation φ φ
 (00) No child safety seat

Designed for Rear Facing for This Age/Weight

(01) Rear facing
 (02) Forward facing
 (08) Other orientation (specify):

(09) Unknown orientation

Designed For Forward Facing for This Age/Weight

(11) Rear facing
 (12) Forward facing
 (18) Other orientation (specify):

(19) Unknown orientation

Unknown Design or Orientation For This Age/Weight, or Unknown Age/Weight

(21) Rear facing
 (22) Forward facing
 (28) Other orientation (specify):

(29) Unknown orientation

(99) Unknown if child safety seat used

31. Child Safety Seat Harness Usage φ φ

32. Child Safety Seat Shield Usage φ φ

33. Child Safety Seat Tether Usage φ φ

Note: Options below applicable to
 Variables OA31-OA33.
 (00) No child safety seat

Not Designed With Harness/Shield/Tether

(01) After market harness/shield/tether
 added, not used
 (02) After market harness/shield/tether used
 (03) Child safety seat used, but no after market
 harness/shield/tether added
 (09) Unknown if harness/shield/tether
 added or used

Designed With Harness/Shield/Tether

(11) Harness/shield/tether not used
 (12) Harness/shield/tether used
 (19) Unknown if harness/shield/tether used

Unknown If Designed With Harness/Shield/Tether

(21) Harness/shield/tether not used
 (22) Harness/shield/tether used
 (29) Unknown if harness/shield/tether used

(99) Unknown if child safety seat used

INJURY CONSEQUENCES34. Injury Severity (Police Rating) φ

- (0) O - No injury
- (1) C - Possible injury
- (2) B - Nonincapacitating injury
- (3) A - Incapacitating injury
- (4) K - Killed
- (5) U - Injury, severity unknown
- (6) Died prior to accident
- (9) Unknown

35. Treatment - Mortality φ

- (0) No treatment
- (1) Fatal
- (2) Fatal - ruled disease (specify):

Nonfatal

- (3) Hospitalization
- (4) Transported and released
- (5) Treatment at scene - nontransported
- (6) Treatment later
- (8) Treatment - other (specify):

- (9) Unknown

36. Type Of Medical Facility (for Initial Treatment) φ

- (0) Not treated at a medical facility
- (1) Trauma center
- (2) Hospital
- (3) Medical clinic
- (4) Physician's office
- (5) Treatment later at medical facility
- (8) Other (specify):

- (9) Unknown

37. Hospital Stay φ φ

- (00) Not Hospitalized
- _____ Code the number of days (up through 60) that the occupant stayed in hospital.
- (61) 61 days or more
- (99) Unknown

99. Case Occupant φ

- (0) Not the Case Occupant
- (1) This is the Case Occupant
- (2) This is the Case Occupant in another case.

38. Working Days Lost 9 7

- _____ Code the number of days (up through 60) that the occupant lost from work due to the accident
- (00) No working days lost
- (61) 61 days or more
- (62) Fatally injured
- (97) Not working prior to accident
- (99) Unknown

STOP - GO TO VARIABLE 44 ON PAGE 7**VARIABLES 39 THROUGH 43 ARE COMPLETED BY THE ZONE CENTER**39. Time to Death φ φ

- _____ Code number of hours from time of accident to time of death up through 24 hours. If time of death is greater than 24 hours, code number of days. (Note: 1 day = 31, 2 days = 32, ... n days = 30 + n up through 30 days = 60)
- (00) Not fatal
- (96) Fatal - ruled disease
- (99) Unknown

40. 1st Medically Reported Cause of Death φ φ41. 2nd Medically Reported Cause of Death φ φ42. 3rd Medically Reported Cause of Death φ φ

- _____ Code the Occupant Injury from line number(s) for the medically reported injury(s) which reportedly contributed to this occupant's death
- (00) Not fatal or no additional causes
- (96) Mode of death given but specific injuries are not linked to cause of death. (specify):

(97) Other result (includes fatal ruled disease) (specify):

(99) Unknown

43. Number of Recorded Injuries for This Occupant φ φ

- _____ Code the actual number of injuries recorded for this occupant.
- (00) No recorded injuries
- (97) Injured, details unknown
- (99) Unknown if injured

AUTOMATIC BELT SYSTEM44. Automatic (Passive) Belt System Availability/ Function ϕ

- (0) Not equipped/not available
- (1) 2 point automatic belts
- (2) 3 point automatic belts
- (3) Automatic belts - type unknown

Non-functional

- (4) Automatic belts destroyed or rendered inoperative
- (9) Unknown

45. Automatic (Passive) Belt System Use ϕ

- (0) Not equipped/not available/destroyed or rendered inoperative
- (1) Automatic belt in use
- (2) Automatic belt not in use (manually disconnected, motorized track inoperative) (specify): _____
- (3) Automatic belt use unknown
- (9) Unknown

46. Automatic (Passive) Belt System Type ϕ

- (0) Not equipped/not available
- (1) Non-motorized system
- (2) Motorized system
- (9) Unknown

47. Proper Use of Automatic (Passive) Belt System ϕ

- (0) Not equipped/not available/not used
- (1) Automatic belt used properly
- (2) Automatic belt used properly with child safety seat

Automatic Belt Used Improperly

- (3) Automatic shoulder belt worn under arm
- (4) Automatic shoulder belt worn behind back
- (5) Automatic belt worn around more than one person
- (6) Lap portion of automatic belt worn on abdomen
- (7) Automatic lap and shoulder belt or automatic shoulder belt used improperly with child safety seat (specify): _____
- (8) Other improper use of automatic belt system (specify): _____
- (9) Unknown

48. Automatic (Passive) Belt Failure Modes During Accident ϕ

- (0) Not equipped/not available/not in use
- (1) No automatic belt failure(s)
- (2) Torn webbing (stretched webbing not included)
- (3) Broken buckle or latchplate
- (4) Upper anchorage separated
- (5) Other anchorage separated (specify): _____
- (6) Broken retractor
- (7) Combination of above (specify): _____
- (8) Other automatic belt failure (specify): _____
- (9) Unknown

49. Seat Orientation (this Occupant Position) 1

- (0) Occupant not seated or no seat
- (1) Forward facing seat
- (2) Rear facing seat
- (3) Side facing seat (inward)
- (4) Side facing seat (outward)
- (8) Other (specify): _____
- (9) Unknown

STOP - VARIABLES 50 THROUGH 52 ARE COMPLETED BY THE ZONE CENTER**TRAUMA DATA**50. Glasgow Coma Scale (GCS) Score ϕ ϕ
(at Medical Facility)

- (00) Not injured
- (01) Injured - not treated at medical facility
- (02) No GCS Score at medical facility
- (03-15) Code the actual value of the initial GCS Score recorded at medical facility.
- (97) Injured, details unknown
- (99) Unknown if injured

51. Was the Occupant Given Blood? 1

- (1) No - blood not given
- (2) Yes - blood given (specify units): _____
- (9) Unknown if blood given

52. Arterial Blood Gases (ABG) - HCO₃ ϕ ϕ

- (00) Not injured
- (01) Injured, ABGs not measured or reported
- (02-50) Code the actual value of the HCO₃
- (96) ABGs reported, HCO₃ unknown
- (97) Injured, details unknown
- (99) Unknown if injured

ARE ALL APPLICABLE MEDICAL RECORDS INCLUDED WITH INITIAL SUBMISSION?

NO [X] YES []

UPDATE CANDIDATE?

NO [X] YES []



GENERAL VEHICLE FORM

NATIONAL ACCIDENT SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM

1. Primary Sampling Unit Number
2. Case Number - Stratum DSE-93-AB-013
3. Vehicle Number 02

VEHICLE IDENTIFICATION

4. Vehicle Model Year 78
Code the last two digits of the model year
(99) Unknown
5. Vehicle Make (specify): 42
MERCEDES BENZ
Applicable codes are found in your
NASS Data Collection, Coding and
Editing Manual.
(99) Unknown
6. Vehicle Model (specify): 036
450 SEL
Applicable codes are found in your
NASS Data Collection, Coding and
Editing Manual.
(999) Unknown
7. Body Type 04
Note: Applicable codes may be found on
the back of this page.
8. Vehicle Identification Number
11603312 * * * * *
Left justify; Slash zeros and letter Z (0 and Z)
No VIN—Code all zeros
Unknown—Code all nine's

OFFICIAL RECORDS

9. Police Reported Vehicle Disposition 1
(0) Not towed due to vehicle damage
(1) Towed due to vehicle damage
(9) Unknown
10. Police Reported Travel Speed 999
Code to the nearest kph (NOTE: 000 means
less than 0.5 kph)
(160) 159.5 kph and above
(999) Unknown
 mph X 1.6093 = kph

11. Police Reported Alcohol Presence 0
(0) No alcohol present
(1) Yes (alcohol present)
(7) Not reported
(8) No driver present
(9) Unknown

Note: See variables 37 through 55
(Page 4) for information on Other Drugs

12. Alcohol Test Result For Driver 96
Code actual value (decimal implied
before first digit—0.xx)
(95) Test refused
(96) None given
(97) AC test performed, results unknown
(98) No driver present
(99) Unknown

Source: PAR

ACCIDENT RELATED

13. Speed Limit 089
(000) No statutory limit
Code posted or statutory speed limit
in kph
(999) Unknown
55 mph X 1.6093 = 089 kph
14. Attempted Avoidance Maneuver 99
(00) No impact
(01) No avoidance actions
(02) Braking (no lockup)
(03) Braking (lockup)
(04) Braking (lockup unknown)
(05) Releasing brakes
(06) Steering left
(07) Steering right
(08) Braking and steering left
(09) Braking and steering right
(10) Accelerating
(11) Accelerating and steering left
(12) Accelerating and steering right
(97) No driver present
(98) Other action (specify):
(99) Unknown
15. Accident Type 68
Applicable codes may be found on the
back of page two of this field form
(00) No impact
Code the number of the diagram that
best describes the accident circumstance
(98) Other accident type (specify):
(99) Unknown

**** SKIP TO VARIABLE GV37 IF GV07 DOES NOT EQUAL 01-49 ****

CODES FOR BODY TYPE

BEST AVAILABLE COPY

CDS APPLICABLE VEHICLES

Automobiles

- (01) Convertible (excludes sun-roof, t-bar)
- (02) 2-door sedan, hardtop, coupe
- (03) 3-door/2-door hatchback
- (04) 4-door sedan, hardtop
- (05) 5-door/4-door hatchback
- (06) Station wagon (excluding van and truck based)
- (07) Hatchback, number of doors unknown
- (08) Other automobile type (specify):

- (09) Unknown automobile type

Automobile Derivatives

- (10) Auto based pickup (includes El Camino, Caballero, Ranchero, Brat, and Rabbit pickup)
- (11) Auto based panel (cargo station wagon, auto based ambulance/hearse)
- (12) Large limousine - more than four side doors or stretched chassis
- (13) Three-wheel automobile or automobile derivative

Utility Vehicles ($\leq 4,500$ kgs GVWR)

- (14) Compact utility (Jeep CJ-2 - CJ-7, Scrambler, Golden Eagle, Renegade, Laredo, Wrangler, Cherokee [84 and after], Dispatcher, Raider, Bronco II, Bronco [76 and before], Explorer, S-10 Blazer, Geo Tracker, Bravada, S-15 Jimmy, Thing, Pathfinder, Trooper, Trooper II, Rodeo, Amigo, Navajo, 4-Runner, Montero, Samurai, Sidekick, Rocky)
- (15) Large utility (includes Jeep Cherokee [83 and before], Ramcharger, Trailduster, Bronco-fullsize [78 and after], fullsize Blazer, fullsize Jimmy, Landcruiser, Rover, Scout)
- (16) Utility station wagon (Chevy Suburban, GMC Suburban, Travelall, Grand Wagoneer, includes suburban limousine)
- (19) Utility, unknown body type

Van Based Light Trucks ($\leq 4,500$ kgs GVWR)

- (20) Minivan (Chrysler Town and Country, Caravan, Grand Caravan, Voyager, Grand Voyager, Mini-Ram, Dodge/Plymouth Vista, Aerostar, Villager, Lumina APV, Trans Sport, Silhouette, Astro, Safari, Toyota Van, Toyota Minivan, Previa, Nissan Minivan, Quest, Mitsubishi Minivan, Vanagon/Camper.)
- (21) Large van (B150-B350, Sportsman, Royal, Maxiwagon, Ram, Tradesman, Voyager [83 and before], E150-E350, Econoline, Clubwagon, Chateau, G10-G30, Chevy Van, Beauville, Sport Van, G15-G35, Rally Van, Vandura.)
- (22) Step van or walk-in van ($\leq 4,500$ kgs GVWR)
- (23) Van based motorhome ($\leq 4,500$ kgs GVWR)
- (24) Van based school bus ($\leq 4,500$ kgs GVWR)
- (25) Van based other bus ($\leq 4,500$ kgs GVWR)
- (28) Other van type (Hi-Cube Van, Kary) (specify):

- (29) Unknown van type

Light Conventional Trucks (Pickup style cab, $\leq 4,500$ kgs GVWR)

- (30) Compact pickup (D50, Colt P/U, Ram 50, Dakota, Arrow Pickup [foreign], Ranger, Courier, S-10, T-10, LUV, S-15, T-15, Sonoma, Datsun/Nissan Pickup, P'up, Mazda Pickup, Toyota Pickup, Mitsubishi Pickup)
- (31) Large Pickup (Jeep Pickup, Comanche, Ram Pickup, D100-D350, W100-W350, F100-F350, C10-C35, K10-K35, R10-R35, V10-V35, Silverado, Sierra, R100-R500,)

- (32) Pickup with slide-in camper
- (33) Convertible pickup
- (39) Unknown pickup style light conventional truck type

Other Light Trucks ($\leq 4,500$ kgs GVWR)

- (40) Cab chassis based (includes rescue vehicles, light stake, dump, and tow truck)
- (41) Truck based panel
- (42) Light truck based motorhome (chassis mounted)
- (45) Other light conventional truck type
- (48) Unknown light truck type
- (49) Unknown light vehicle type (automobile, utility, van, or light truck)

OTHER VEHICLES

Buses (Excludes Van Based)

- (50) School bus (designed to carry students, not cross country or transit)
- (58) Other bus type (e.g., transit, intercity, bus based motorhome) (specify):
- (59) Unknown bus type

Medium/Heavy Trucks ($> 4,500$ kgs GVWR)

- (60) Step van ($> 4,500$ kgs GVWR)
- (61) Single unit straight truck ($4,500$ kgs $<$ GVWR $\leq 8,850$ kgs)
- (62) Single unit straight truck ($8,850$ kgs $<$ GVWR $\leq 12,000$ kgs)
- (63) Single unit straight truck ($> 12,000$ kgs GVWR)
- (64) Single unit straight truck, GVWR unknown
- (65) Medium/heavy truck based motorhome
- (67) Truck-tractor with no cargo trailer
- (68) Truck-tractor pulling one trailer
- (69) Truck-tractor pulling two or more trailers
- (70) Truck-tractor (unknown if pulling trailer)
- (78) Unknown medium/heavy truck type
- (79) Unknown truck type (light/medium/heavy)

Motored Cycles (Does Not Include All-Terrain Vehicles/Cycles)

- (80) Motorcycle
- (81) Moped (motorized bicycle)
- (82) Three-wheel motorcycle or moped
- (88) Other motored cycle (minibike, motorscooter) (specify):
- (89) Unknown motored cycle type

Other Vehicles

- (90) ATV (All-Terrain Vehicle) and ATC (All-Terrain Cycle)
- (91) Snowmobile
- (92) Farm equipment other than trucks
- (93) Construction equipment other than trucks
- (97) Other vehicle type
- (99) Unknown body type

OCCUPANT RELATED

16. Driver Presence in Vehicle 1
 (0) Driver not present
 (1) Driver present
 (9) Unknown
17. Number of Occupants This Vehicle 0 1
 (00-96) Code actual number of occupants for this vehicle
 (97) 97 or more
 (99) Unknown
18. Number of Occupant Forms Submitted 0 1

VEHICLE WEIGHT ITEMS

19. Vehicle Curb Weight 1 8 5 0
 Code weight to nearest 10 kilograms.
 (045) Less than 450 kilograms
 (610) 6,100 kilograms or more
 (999) Unknown
~~0 4~~ ~~0 8~~ ~~0~~ lbs X .4536 = 1 8 5 1 kgs
 Source: _____
20. Vehicle Cargo Weight 9 9 9 0
 Code weight to nearest 10 kilograms.
 (000) Less than 5 kilograms
 (450) 4,500 kilograms or more
 (999) Unknown
 _____ lbs X .4536 = _____ kgs

RECONSTRUCTION DATA

21. Towed Trailing Unit 0
 (0) No towed unit
 (1) Yes—towed trailing unit
 (9) Unknown
22. Documentation of Trajectory Data for This Vehicle 0
 (0) No
 (1) Yes
23. Post Collision Condition of Tree or Pole (For Highest Delta V) 0
 (0) Not collision (for highest delta V) with tree or pole
 (1) Not damaged
 (2) Cracked/sheared
 (3) Tilted <45 degrees
 (4) Tilted ≥45 degrees
 (5) Uprooted tree
 (6) Separated pole from base
 (7) Pole replaced
 (8) Other (specify): _____
 (9) Unknown






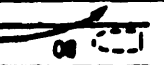
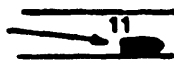





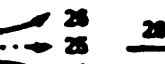
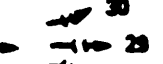





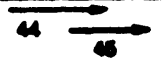
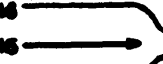







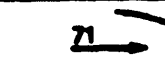


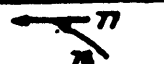



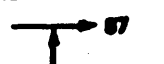


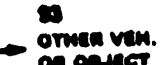
24. Rollover 0
 (0) No rollover (no overturning)
Rollover (primarily about the longitudinal axis)
 (1) Rollover, 1 quarter turn only
 (2) Rollover, 2 quarter turns
 (3) Rollover, 3 quarter turns
 (4) Rollover, 4 or more quarter turns (specify): _____
 (5) Rollover--end-over-end (i.e., primarily about the lateral axis)
 (9) Rollover (overturn), details unknown

OVERRIDE/UNDERRIDE (THIS VEHICLE)

25. Front Override/Underride (this Vehicle) 0
26. Rear Override/Underride (this Vehicle) 0
 (0) No override/underride, or not an end-to-end impact
Override (see specific CDC)
 (1) 1st CDC
 (2) 2nd CDC
 (3) Other not automated CDC (specify): _____
Underride (see specific CDC)
 (4) 1st CDC
 (5) 2nd CDC
 (6) Other not automated CDC (specify): _____
 (7) Medium/heavy truck or bus override
 (9) Unknown

HEADING ANGLE AT IMPACT FOR HIGHEST DELTA V

- Values: (000)-(359) Code actual value
 (997) Noncollision
 (998) Impact with object
 (999) Unknown
27. Heading Angle For This Vehicle 2 6 0
28. Heading Angle For Other Vehicle 1 3 5

Category	Configuration	ACCIDENT TYPES (Includes Intent)					
I Single Driver	A Right Roadside Departure	 01 DRIVE OFF ROAD	 02 CONTROL/ TRACTION LOSS	 03 AVOID COLLISION WITH VEH., PED., ANIM.	04 SPECIFICS OTHER	05 SPECIFICS UNKNOWN	
	B Left Roadside Departure	 06 DRIVE OFF ROAD	 07 CONTROL/ TRACTION LOSS	 08 AVOID COLLISION WITH VEH., PED., ANIM.	09 SPECIFICS OTHER	10 SPECIFICS UNKNOWN	
	C Forward Impact	 11 PARKED VEH.	 12 STA. OBJECT	 13 PEDESTRIAN/ ANIMAL	 14 END DEPARTURE	15 SPECIFICS OTHER	16 SPECIFICS UNKNOWN
II Same Trafficway Same Direction	D Rear-End	 20 STOPPED 21, 22, 23	 21 SLOWER 25, 26, 27	 22 DECEL. 28, 29, 31	 23 (EACH • 32) SPECIFICS OTHER	 24 (EACH • 33) SPECIFICS UNKNOWN	
	E Forward Impact	 34 CONTROL/ TRACTION LOSS	 35 CONTROL/ TRACTION LOSS	 36 AVOID COLLISION WITH VEH.	 37 AVOID COLLISION WITH OBJECT	38 SPECIFICS OTHER	39 SPECIFICS UNKNOWN
	F Sideswipe Angle	 44 (EACH • 48) SPECIFICS OTHER	 45 (EACH • 49) SPECIFICS UNKNOWN				
III Same Trafficway Opposite Direction	G Head-On	 50 LATERAL MOVE	(EACH • 52) SPECIFICS OTHER	(EACH • 53) SPECIFICS UNKNOWN			
	H Forward Impact	 54 CONTROL/ TRACTION LOSS	 55 CONTROL/ TRACTION LOSS	 56 AVOID COLLISION WITH VEH.	 57 AVOID COLLISION WITH OBJECT	58 SPECIFICS OTHER	59 SPECIFICS UNKNOWN
	I Sideswipe Angle	 64 LATERAL MOVE	(EACH • 66) SPECIFICS OTHER	(EACH • 67) SPECIFICS UNKNOWN			
IV Change Trafficway Vehicle Turning	J Turn Across Path	 68 INITIAL OPPOSITE DIRECTIONS	 69 INITIAL SAME DIRECTIONS	 70 (EACH • 74) SPECIFICS OTHER	 71 (EACH • 75) SPECIFICS UNKNOWN		
	K Turn Into Path	 72 TURN INTO SAME DIRECTION	 73 TURN INTO OPPOSITE DIRECTIONS	 74 (EACH • 84) SPECIFICS OTHER	 75 (EACH • 85) SPECIFICS UNKNOWN		
V Intersecting Paths (Vehicle Damage)	L Straight Paths	 87 (EACH • 90) SPECIFICS OTHER	 88 (EACH • 91) SPECIFICS UNKNOWN				
VI Miscellaneous	M Backing Etc.	 82 BACKING VEH.	 83 OTHER VEH. OR OBJECT	84 Other Accident Type 85 Unknown Accident Type 86 No Impact			

29. Basis for Total Delta V (highest)

3*Delta V Calculated*

- (1) CRASH program—damage only routine
- (2) CRASH program—damage and trajectory routine
- (3) Missing vehicle algorithm

Delta V Not Calculated

- (4) At least one vehicle (which may be this vehicle) is beyond the scope of an acceptable reconstruction program, regardless of collision conditions.
- (5) All vehicles within scope (CDC applicable) of CRASH program but one of the collision conditions is beyond the scope of the CRASH program or other acceptable reconstruction technique, regardless of adequacy of damage data.
- (6) All vehicle and collision conditions are within scope of one of the acceptable reconstruction programs, but there is insufficient data available.

COMPUTER GENERATED DELTA V

30. Total Delta V

Secondary Highest

0 0 77.38 Nearest kph(4.59 mph)

(NOTE: 000 means less than 0.5 kph)

(160) 159.5 kph and above

(999) Unknown

31. Longitudinal Component of Delta V

+ 0 0 4-4.23 Nearest kph(-2.63 mph)

(NOTE: 000 means greater than -0.5 kph and less than +0.5 kph)

(±160) ±159.5 kph and above

(999) Unknown

32. Lateral Component of Delta V

Secondary

Highest

+

0 0 6-6.44 Nearest kph(-3.76 mph)

(NOTE: 000 means greater than -0.5 kph and less than +0.5 kph)

(±160) ±159.5 kph and above

(999) Unknown

33. Energy Absorption

0 0 9 5 0 09511 Nearest 100 joules(7615 ft-lbs)

(NOTE: 0000 means less than 50 joules)

(9997) 999,650 joules or more

(9999) Unknown

34. Confidence In Reconstruction Program Results (For Highest Delta V)

(0) No reconstruction

(1) Collision fits model — results appear reasonable

(2) Collision fits model — results appear high

(3) Collision fits model — results appear low

(4) Borderline reconstruction — results appear reasonable

35. Type of Vehicle Inspection

(0) No inspection

(1) Complete inspection

(2) Partial inspection (specify):

36. Is this an AOPS Vehicle?

(0) No

(1) Yes - researcher determined

(2) VIN determined air bag system

(3) VIN determined automatic (passive) belts

(4) VIN determined air bag and automatic (passive) belts

IS OLDMISS APPLICABLE FOR THIS VEHICLE? ☒ YES [] NOIF YES: IS A COMPLETED OLDMISS PROGRAM SUMMARY INCLUDED? ☒ YES [] NO

37. Police Reported Other Drug Presence φ

- (0) No other drugs present
- (1) Yes (other drug present)
- (7) Not reported
- (8) No driver present
- (9) Unknown

38. Police Reported Drug Evaluation Classification φ

(DEC) Test For Driver

- (0) No DEC process available or given
- (1) DEC process given, results known
- (2) DEC process given, results unknown
- (3) DEC process available, unknown if given
- (8) No driver present

39. Other Drug Specimen Test Type For Driver φ

- (0) No specimen test given
- (1) Blood test
- (2) Urine test
- (3) Other specimen tests (specify):

-
- (7) Unspecified specimen test
 - (8) No driver present
 - (9) Unknown if specimen test given

DRUG EVALUATION CLASSIFICATION

OTHER DRUGS TEST RESULTS FOR DRIVER

	DEC Test Results	Specimen Test Results
Narcotic Drug	40. <u>φ</u>	41. <u>φ</u>
Depressant Drug	42. <u>φ</u>	43. <u>φ</u>
Stimulant Drug	44. <u>φ</u>	45. <u>φ</u>
Hallucinogen Drug	46. <u>φ</u>	47. <u>φ</u>
Cannabinoid Drug	48. <u>φ</u>	49. <u>φ</u>
Phencyclidine (PCP)	50. <u>φ</u>	51. <u>φ</u>
Inhalant Drug	52. <u>φ</u>	53. <u>φ</u>
Other Drug (Excluding Nicotine, Aspirin, Alcohol, Drugs Administered Post-Crash)	54. <u>φ</u>	55. <u>φ</u>

Codes For DEC Test Results

- (0) No DEC test given
- (1) Passed DEC test
- (2) Failed DEC test
- (3) DEC test given—results unknown
- (8) No driver present
- (9) Unknown if DEC test given

Codes for Specimen Test Results

- (0) No specimen test given
- (1) Drug not found in specimen
- (2) Drug found in specimen
- (7) Specimen test given, results unknown or not obtained
- (8) No driver present
- (9) Unknown if specimen test given

OTHER DATA

56. Driver's Zip Code

- (00000) Driver not present
 (00001) Driver not a resident of U.S. or territories
 _____ Code actual 5-digit zip code
 (99999) Unknown

57. Driver's Race/Ethnic Origin

- (0) Driver not present
 (1) White (non-Hispanic)
 (2) Black (non-Hispanic)
 (3) White (Hispanic)
 (4) Black (Hispanic)
 (5) American Indian, Eskimo or Aleut
 (6) Asian or Pacific Islander
 (8) Other (specify): _____
 (9) Unknown

58. Vehicle Special Use (This Trip)

- (0) No special use
 (1) Taxi
 (2) Vehicle used as school bus
 (3) Vehicle used as other bus
 (4) Military
 (5) Police
 (6) Ambulance
 (7) Fire truck or car
 (8) Other (specify): _____
 (9) Unknown

ROLLOVER DATA

If GV07 (Body Type) \neq 1-49, leave GV59-GV63 blank.
 If GV24 (Rollover) = 0, then GV59-GV63 must equal 0.
 If GV24 = 9, then GV59-GV63 must equal 9.

59. Rollover Initiation Type

- (0) No rollover
 (1) Trip-over
 (2) Flip-over
 (3) Turn-over
 (4) Climb-over
 (5) Fall-over
 (6) Bounce-over
 (7) Collision with another vehicle
 (8) Other rollover initiation type specify: _____
 (9) Unknown rollover initiation type

60. Location of Rollover Initiation

- (0) No rollover
 (1) On roadway
 (2) On shoulder—paved
 (3) On shoulder—unpaved
 (4) On roadside or divided trafficway median
 (9) Unknown

61. Rollover Initiation Object Contacted

62. Location on Vehicle Where Initial Principal Tripping Force Is Applied

- (0) No rollover
 (1) Wheels/tires
 (2) Side plane
 (3) End plane
 (4) Undercarriage
 (5) Other location on vehicle (specify): _____
 (8) Non-contact rollover forces (specify): _____
 (9) Unknown

63. Direction of Initial Roll

- (0) No rollover
 (1) Roll right - primarily about the longitudinal axis
 (2) Roll left - primarily about the longitudinal axis
 (5) End-over-end (i.e., primarily about the lateral axis)
 (9) Unknown roll direction

PRECRAASH DATA

64. Pre-Event Movement (Prior to Recognition of Critical Event)

- (01) Going straight
 (02) Slowing or stopping in traffic lane
 (03) Starting in traffic lane
 (04) Stopped in traffic lane
 (05) Passing or overtaking another vehicle
 (06) Disabled or parked in travel lane
 (07) Leaving a parking position
 (08) Entering a parking position
 (09) Turning right
 (10) Turning left
 (11) Making a U-turn
 (12) Backing up (other than for parking position)
 (13) Negotiating a curve
 (14) Changing lanes
 (15) Merging
 (16) Successful avoidance maneuver to a previous critical event
 (97) Other (specify): _____
 (98) No driver present
 (99) Unknown

CODES FOR ROLLOVER INITIATION OBJECT CONTACTED

- (00) No rollover
- (01-30) — Vehicle Number

Noncollision

- (31) Turn-over — fall-over
- (33) Jackknife

Collision With Fixed Object

- (41) Tree (≤ 10 cm in diameter)
- (42) Tree (> 10 cm in diameter)
- (43) Shrubbery or bush
- (44) Embankment

- (45) Breakaway pole or post (any diameter)

Nonbreakaway Pole or Post

- (50) Pole or post (≤ 10 cm in diameter)
- (51) Pole or post (> 10 cm but ≤ 30 cm in diameter)
- (52) Pole or post (> 30 cm in diameter)
- (53) Pole or post (diameter unknown)

- (54) Concrete traffic barrier
- (55) Impact attenuator
- (56) Other traffic barrier (includes guardrail)
(specify): _____

- (57) Fence
- (58) Wall
- (59) Building
- (60) Ditch or culvert
- (61) Ground
- (62) Fire hydrant
- (63) Curb
- (64) Bridge
- (68) Other fixed object (specify): _____

- (69) Unknown fixed object

Collision with Nonfixed Object

- (71) Motor vehicle not in-transport
- (76) Animal
- (77) Train
- (78) Trailer, disconnected in transport
- (88) Other nonfixed object (specify): _____

- (89) Unknown nonfixed object

- (98) Other event (specify): _____

- (99) Unknown event or object

PRECRASH DATA (Continued)

65. Critical Precrash Event 1 5*This Vehicle Loss of Control Due To:*

- (01) Blow out or flat tire
- (02) Stalled engine
- (03) Disabling vehicle failure (e.g., wheel fell off) (specify): _____
- (04) Non-disabling vehicle problem (e.g., hood flew up) (specify): _____
- (05) Poor road conditions (puddle, pot hole, ice, etc.) (specify): _____
- (06) Traveling too fast for conditions
- (08) Other cause of control loss (specify): _____
- (09) Unknown cause of control loss

This Vehicle Traveling

- (10) Over the lane line on left side of travel lane
- (11) Over the lane line on right side of travel lane
- (12) Off the edge of the road on the left side
- (13) Off the edge of the road on the right side
- (14) End departure
- (15) Turning left at intersection
- (16) Turning right at intersection
- (17) Crossing over (passing through) intersection
- (19) Unknown travel direction

Other Motor Vehicle In Lane

- (50) Stopped
- (51) Traveling in same direction with lower speed (i.e., lower steady speed or decelerating)
- (52) Traveling in same direction with higher speed
- (53) Traveling in opposite direction
- (54) In crossover
- (55) Backing
- (59) Unknown travel direction of other motor vehicle in lane

Other Motor Vehicle Encroaching Into Lane

- (60) From adjacent lane (same direction)—over left lane line
- (61) From adjacent lane (same direction)—over right lane line
- (62) From opposite direction—over left lane line
- (63) From opposite direction—over right lane line
- (64) From parking lane
- (65) From crossing street, turning into same direction
- (66) From crossing street, across path
- (67) From crossing street, turning into opposite direction
- (68) From crossing street, intended path not known
- (70) From driveway, turning into same direction
- (71) From driveway, across path
- (72) From driveway, turning into opposite direction
- (73) From driveway, intended path not known
- (74) From entrance to limited access highway
- (78) Encroachment by other vehicle—details unknown

Pedestrian or Pedalcyclist, or Other Nonmotorist

- (80) Pedestrian in roadway
- (81) Pedestrian approaching roadway
- (82) Pedestrian - unknown location
- (83) Pedalcyclist or other nonmotorist in roadway (specify): _____
- (84) Pedalcyclist or other nonmotorist approaching roadway (specify): _____
- (85) Pedalcyclist or other nonmotorist—unknown location (specify): _____

Object or Animal

- (87) Animal in roadway
- (88) Animal approaching roadway
- (89) Animal—unknown location
- (90) Object in roadway
- (91) Object approaching roadway
- (92) Object—unknown location

(98) Other critical precrash event (specify): _____

(99) Unknown

For Corrective Actions Attempted see variable GV14 (Attempted Avoidance Manuever)

66. Precrash Stability After Avoidance Manuever 9

- (0) No avoidance manuever
- (1) Tracking
- (2) Skidding longitudinally—rotation less than 30 degrees
- (3) Skidding laterally—clockwise rotation
- (4) Skidding laterally—counterclockwise rotation
- (7) Other vehicle loss-of-control (specify): _____
- (8) No driver present
- (9) Precrash stability unknown

67. Precrash Directional Consequences of Avoidance Manuever (Corrective Action) 9

- (0) No avoidance manuever
- (1) Vehicle stayed in travel lane where avoidance manuever was initiated
- (2) Vehicle stayed on roadway but left travel lane where avoidance manuever was initiated
- (3) Vehicle stayed on roadway, not known if left travel lane where avoidance manuever was initiated
- (4) Vehicle departed roadway
- (5) Avoidance manuever initiated off roadway
- (8) No driver present
- (9) Directional consequences unknown

*** IF THE CDS APPLICABLE VEHICLE WAS NOT INSPECTED (I.E., GV35 = 0), ***
DO NOT COMPLETE THE EXTERIOR AND INTERIOR VEHICLE FORMS.

*** IF GV07 DOES NOT EQUAL 01-49, DO NOT COMPLETE ***
THE EXTERIOR VEHICLE, INTERIOR VEHICLE,
OCCUPANT ASSESSMENT, AND OCCUPANT INJURY FORMS.



OCCUPANT ASSESSMENT FORM

1. Primary Sampling Unit Number 2. Case Number - Stratum DST-93-AB-0133. Vehicle Number 024. Occupant Number 01

OCCUPANT'S CHARACTERISTICS

5. Occupant's Age 50

Code actual age at time of accident.

(00) Less than one year old (specify by month):

(97) 97 years and older _____

(99) Unknown

6. Occupant's Sex 1

(1) Male

(2) Female

(9) Unknown

7. Occupant's Height 999Code actual height to the nearest
centimeter.

(999) Unknown

_____ inches X 2.54 = _____ centimeters

8. Occupant's Weight 999Code actual weight to the nearest
kilogram.

(999) Unknown

_____ pounds X .4536 = _____ kilograms

9. Occupant's Role 1

(1) Driver

(2) Passenger

(9) Unknown

OCCUPANT'S SEATING

10. Occupant's Seat Position 11*Front Seat*

(11) Left side

(12) Middle

(13) Right side

(14) Other (specify): _____

(15) On or in the lap of another occupant

Second Seat

(21) Left side

(22) Middle

(23) Right side

(24) Other (specify): _____

(25) On or in the lap of another occupant

Third Seat

(31) Left side

(32) Middle

(33) Right side

(34) Other (specify): _____

(35) On or in the lap of another occupant

Fourth Seat

(41) Left side

(42) Middle

(43) Right side

(44) Other (specify): _____

(45) On or in the lap of another occupant

(97) In or on unenclosed area

(98) Other seat (specify): _____

(99) Unknown

11. Occupant's Posture 9

(0) Normal posture

Abnormal posture

(1) Kneeling or standing on seat

(2) Lying on or across seat

(3) Kneeling, standing or sitting in front of seat

(4) Sitting sideways or turned to talk with another
occupant or to look out a rear window

(5) Sitting on a console

(6) Lying back in a reclined seat position

(7) Bracing with feet or hands on a surface in front
of seat

(8) Other abnormal posture (specify): _____

(9) Unknown

EJECTION/ENTRAPMENT

12. Ejection

φ

- (0) No ejection
- (1) Complete ejection
- (2) Partial ejection
- (3) Ejection, unknown degree
- (9) Unknown

13. Ejection Area

φ

- (0) No ejection
- (1) Windshield
- (2) Left front
- (3) Right front
- (4) Left rear
- (5) Right rear
- (6) Rear
- (7) Roof
- (8) Other area (e.g., back of pickup, etc.)
(specify): _____
- (9) Unknown

14. Ejection Medium

φ

- (0) No ejection
- (1) Door/hatch/tailgate
- (2) Nonfixed roof structure
- (3) Fixed glazing
- (4) Nonfixed glazing (specify): _____
- (5) Integral structure
- (8) Other medium (specify): _____
- (9) Unknown

15. Medium Status (Immediately Prior To Impact)

φ

- (0) No ejection
- (1) Open
- (2) Closed
- (3) Integral structure
- (9) Unknown

16. Entrapment

φ

(NOTE: Entrapped means that part of the person was in the vehicle and mechanically restrained; jammed doors and immobilizing injuries by themselves are not sufficient to constitute entrapment.)

- (0) Not entrapped
- (1) Entrapped
- (9) Unknown

RESTRAINT SYSTEM EVALUATION

17. Manual (Active) Belt System Availability 9

- (0) None available
- (1) Belt removed/destroyed
- (2) Shoulder belt
- (3) Lap belt
- (4) Lap and shoulder belt
- (5) Belt available—type unknown

Integral Belt Partially Destroyed

- (6) Shoulder belt (lap belt destroyed/removed)
- (7) Lap belt (shoulder belt destroyed/removed)

(8) Other belt (specify): _____

(9) Unknown

18. Manual (Active) Belt System Use 9 9

- (00) None used, not available, or belt removed/destroyed
- (01) Inoperative (specify): _____

(02) Shoulder belt

(03) Lap belt

(04) Lap and shoulder belt

(05) Belt used—type unknown

(08) Other belt used (specify): _____

(12) Shoulder belt used with child safety seat

(13) Lap belt used with child safety seat

(14) Lap and shoulder belt used with child safety seat

(15) Belt used with child safety seat—type unknown

(18) Other belt used with child safety seat (specify): _____

(99) Unknown if belt used

19. Proper Use of Manual (Active) Belts 9

- (0) None used or not available
- (1) Belt used properly
- (2) Belt used properly with child safety seat

Belt Used Improperly

- (3) Shoulder belt worn under arm
- (4) Shoulder belt worn behind back or seat
- (5) Belt worn around more than one person
- (6) Lap belt worn on abdomen
- (7) Lap belt or lap and shoulder belt used improperly with child safety seat (specify): _____

(8) Other improper use of manual belt system (specify): _____

(9) Unknown

20. Manual (Active) Belt Failure Modes During Accident 9

- (0) No manual belt used
- (1) No manual belt failure(s)
- (2) Torn webbing (stretched webbing not included)
- (3) Broken buckle or latchplate
- (4) Upper anchorage separated
- (5) Other anchorage separated (specify): _____

(6) Broken retractor

(7) Combination of above (specify): _____

(8) Other manual belt failure (specify): _____

(9) Unknown

21. Air Bag System Availability/Function φ

- (0) Not equipped/not available
- (1) Air bag

Non-functional

(2) Air bag disconnected (specify): _____

(3) Air bag not reinstalled

(9) Unknown

22. Air Bag System Deployment φ

- (0) Not equipped/not available
- (1) Air bag deployed during accident (as a result of impact)
- (2) Air bag deployed inadvertently just prior to accident
- (3) Air bag deployed, accident sequence undetermined
- (4) Nondeployed
- (5) Unknown if deployed
- (6) Air bag deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)
- (9) Unknown

23. Are There Indications of Air Bag System Failure? φ

- (0) Not equipped/not available
- (1) No
- (2) Yes (specify): _____

(9) Unknown

Note: See Variables 44 through 48 (Page 5) for Information on Automatic Belts

24. Police Reported Restraint Use φ

- (0) None used
- (1) Police did not indicate restraint use
- (2) Shoulder belt
- (3) Lap belt
- (4) Lap and shoulder belt
- (5) Belt used, type not specified
- (6) Child safety seat
- (7) Other or automatic restraint (specify): _____

(8) Restrained, type unknown

(9) Police indicated "unknown"

HEAD RESTRAINT AND SEAT EVALUATION

25. Head Restraint Type/Damage by Occupant at This Occupant Position 9

- (0) No head restraints
- (1) Integral—no damage
- (2) Integral—damaged during accident
- (3) Adjustable—no damage
- (4) Adjustable—damaged during accident
- (5) Add-on—no damage
- (6) Add-on—damaged during accident
- (8) Other (specify): _____

(9) Unknown

26. Seat Type (this Occupant Position) 9 9

- (00) Occupant not seated or no seat
- (01) Bucket
- (02) Bucket with folding back
- (03) Bench
- (04) Bench with separate back cushions
- (05) Bench with folding back(s)
- (06) Split bench with separate back cushions
- (07) Split bench with folding back(s)
- (08) Pedestal (i.e., column supported)
- (09) Other seat type (specify): _____

(10) Box mounted seat (i.e., van type)

(99) Unknown

27. Seat Performance (this Occupant Position) 9

- (0) Occupant not seated or no seat
- (1) No seat performance failure(s)
- (2) Seat adjusters failed
- (3) Seat back folding locks or "seat back" failed
- (4) Seat track/anchors failed
- (5) Deformed by impact of occupant
- (6) Deformed by passenger compartment intrusion (specify): _____

(7) Combination of above (specify): _____

(8) Other (specify): _____

(9) Unknown

CHILD SAFETY SEAT

28. Child Safety Seat Make/Model ϕ ϕ ϕ

(000) No child safety seat

Applicable codes are found in your NASS CDS
Data Collection, Coding and Editing

(950) Built-in child safety seat

(997) Other make/model (specify):

(998) Unknown make/model

(999) Unknown if child safety seat used

29. Type of Child Safety Seat ϕ

(0) No child safety seat

(1) Infant seat

(2) Toddler seat

(3) Convertible seat

(4) Booster seat

(7) Other type child safety seat (specify):

(8) Unknown child safety seat type

(9) Unknown if child safety seat used

30. Child Safety Seat Orientation ϕ ϕ

(00) No child safety seat

Designed for Rear Facing for This Age/Weight

(01) Rear facing

(02) Forward facing

(08) Other orientation (specify):

(09) Unknown orientation*Designed For Forward Facing for This Age/Weight*

(11) Rear facing

(12) Forward facing

(18) Other orientation (specify):

(19) Unknown orientation*Unknown Design or Orientation For This
Age/Weight, or Unknown Age/Weight*

(21) Rear facing

(22) Forward facing

(28) Other orientation (specify):

(29) Unknown orientation

(99) Unknown if child safety seat used

31. Child Safety Seat Harness Usage ϕ ϕ32. Child Safety Seat Shield Usage ϕ ϕ33. Child Safety Seat Tether Usage ϕ ϕNote: Options below applicable to
Variables OA31-OA33.

(00) No child safety seat

Not Designed With Harness/Shield/Tether(01) After market harness/shield/tether
added, not used

(02) After market harness/shield/tether used

(03) Child safety seat used, but no after market
harness/shield/tether added(09) Unknown if harness/shield/tether
added or used*Designed With Harness/Shield/Tether*

(11) Harness/shield/tether not used

(12) Harness/shield/tether used

(19) Unknown if harness/shield/tether used

Unknown If Designed With Harness/Shield/Tether

(21) Harness/shield/tether not used

(22) Harness/shield/tether used

(29) Unknown if harness/shield/tether used

(99) Unknown if child safety seat used

INJURY CONSEQUENCES**34. Injury Severity (Police Rating)** φ

- (0) O - No injury
- (1) C - Possible injury
- (2) B - Nonincapacitating injury
- (3) A - Incapacitating injury
- (4) K - Killed
- (5) U - Injury, severity unknown
- (6) Died prior to accident
- (9) Unknown

35. Treatment - Mortality 9

- (0) No treatment
- (1) Fatal
- (2) Fatal - ruled disease (specify):

Nonfatal

- (3) Hospitalization
- (4) Transported and released
- (5) Treatment at scene - nontransported
- (6) Treatment later
- (8) Treatment - other (specify):

- (9) Unknown

36. Type Of Medical Facility (for Initial Treatment) 9

- (0) Not treated at a medical facility
- (1) Trauma center
- (2) Hospital
- (3) Medical clinic
- (4) Physician's office
- (5) Treatment later at medical facility
- (8) Other (specify):

- (9) Unknown

37. Hospital Stay 9 9

- (00) Not Hospitalized
- _____ Code the number of days (up through 60) that the occupant stayed in hospital.
- (61) 61 days or more
- (99) Unknown

99. Case Occupant φ

- (0) Not the Case Occupant
- (1) This is the Case Occupant
- (2) This is the Case Occupant in another case.

38. Working Days Lost 9 9

- _____ Code the number of days (up through 60) that the occupant lost from work due to the accident
- (00) No working days lost
- (61) 61 days or more
- (62) Fatally injured
- (97) Not working prior to accident
- (99) Unknown

STOP - GO TO VARIABLE 44 ON PAGE 7**VARIABLES 39 THROUGH 43 ARE COMPLETED BY THE ZONE CENTER****39. Time to Death** φ φ

- _____ Code number of hours from time of accident to time of death up through 24 hours. If time of death is greater than 24 hours, code number of days. (Note: 1 day = 31, 2 days = 32, ... n days = 30 + n up through 30 days = 60)
- (00) Not fatal
- (96) Fatal - ruled disease
- (99) Unknown

40. 1st Medically Reported Cause of Death φ φ**41. 2nd Medically Reported Cause of Death** φ φ**42. 3rd Medically Reported Cause of Death** φ φ

- _____ Code the Occupant Injury from line number(s) for the medically reported injury(s) which reportedly contributed to this occupant's death
- (00) Not fatal or no additional causes
- (96) Mode of death given but specific injuries are not linked to cause of death. (specify):

- (97) Other result (includes fatal ruled disease) (specify):

- (99) Unknown

43. Number of Recorded Injuries for This Occupant 9 9

- _____ Code the actual number of injuries recorded for this occupant.
- (00) No recorded injuries
- (97) Injured, details unknown
- (99) Unknown if injured

AUTOMATIC BELT SYSTEM**44. Automatic (Passive) Belt System Availability/Function** ϕ

- (0) Not equipped/not available
- (1) 2 point automatic belts
- (2) 3 point automatic belts
- (3) Automatic belts - type unknown

Non-functional

- (4) Automatic belts destroyed or rendered inoperative
- (9) Unknown

45. Automatic (Passive) Belt System Use ϕ

- (0) Not equipped/not available/destroyed or rendered inoperative
- (1) Automatic belt in use
- (2) Automatic belt not in use (manually disconnected, motorized track inoperative) (specify):

- (3) Automatic belt use unknown
- (9) Unknown

46. Automatic (Passive) Belt System Type ϕ

- (0) Not equipped/not available
- (1) Non-motorized system
- (2) Motorized system
- (9) Unknown

47. Proper Use of Automatic (Passive) Belt System ϕ

- (0) Not equipped/not available/not used
- (1) Automatic belt used properly
- (2) Automatic belt used properly with child safety seat

Automatic Belt Used Improperly

- (3) Automatic shoulder belt worn under arm
- (4) Automatic shoulder belt worn behind back
- (5) Automatic belt worn around more than one person
- (6) Lap portion of automatic belt worn on abdomen
- (7) Automatic lap and shoulder belt or automatic shoulder belt used improperly with child safety seat (specify):
- (8) Other improper use of automatic belt system (specify):
- (9) Unknown

48. Automatic (Passive) Belt Failure Modes During Accident ϕ

- (0) Not equipped/not available/not in use
- (1) No automatic belt failure(s)
- (2) Torn webbing (stretched webbing not included)
- (3) Broken buckle or latchplate
- (4) Upper anchorage separated
- (5) Other anchorage separated (specify):
- (6) Broken retractor
- (7) Combination of above (specify):
- (8) Other automatic belt failure (specify):
- (9) Unknown

49. Seat Orientation (this Occupant Position) 1

- (0) Occupant not seated or no seat
- (1) Forward facing seat
- (2) Rear facing seat
- (3) Side facing seat (inward)
- (4) Side facing seat (outward)
- (8) Other (specify):

- (9) Unknown

STOP - VARIABLES 50 THROUGH 52 ARE COMPLETED BY THE ZONE CENTER**TRAUMA DATA****50. Glasgow Coma Scale (GCS) Score** 9 9

- (at Medical Facility)
- (00) Not injured
- (01) Injured - not treated at medical facility
- (02) No GCS Score at medical facility
- (03-15) Code the actual value of the initial GCS Score recorded at medical facility.
- (97) Injured, details unknown
- (99) Unknown if injured

51. Was the Occupant Given Blood? 9

- (1) No - blood not given
- (2) Yes - blood given (specify units):
- (9) Unknown if blood given

52. Arterial Blood Gases (ABG) - HCO₃ 9 9

- (00) Not injured
- (01) Injured, ABGs not measured or reported
- (02-50) Code the actual value of the HCO₃
- (96) ABGs reported, HCO₃ unknown
- (97) Injured, details unknown
- (99) Unknown if injured

ARE ALL APPLICABLE MEDICAL RECORDS INCLUDED WITH INITIAL SUBMISSION?

NO [X] YES []

UPDATE CANDIDATE?

NO [X] YES []

SUMMARY OF OLDNISPC RESULTS

MISSING VEHICLE RECONSTRUCTION

SPEED CHANGE (DAMAGE)

	RESULTANT MPH (KPH)	LONGITUDINAL MPH (KPH)	LATERAL MPH (KPH)	PDOF DEG
VEH #1 (KNOWN)	5.95 (9.58)	-5.95 (-9.58)	.00 (.00)	.00
VEH #2 (ESTIMATED)	4.59 (7.38)	-2.63 (-4.23)	-3.76 (-6.04)	55.00

	ENERGY FT-LBS (NT-M)	FORCE LBS (NT)
VEH #1 (KNOWN)	5314.9 (7205.3)	20586.8 (91570.3)
VEH #2 (ESTIMATED)	7015.7 (9511.0)	20586.8 (91570.3)

SUMMARY OF DAMAGE DATA

VEHICLE #1 (KNOWN DAMAGE DIMENSION)			VEHICLE #2 (ESTIMATED DAMAGE DIMENSION)		
	IN	(CM)		IN	(CM)
L-----	60.0	152.4	L-----	50.4	128.1
C1-----	.0	.0	C1-----	3.3	8.4
C2-----	.0	.0	C2-----	3.3	8.4
C3-----	.0	.0	C3-----	3.3	8.4
C4-----	.4	1.0	C4-----	3.7	9.5
C5-----	.8	2.0	C5-----	4.2	10.6
C6-----	2.2	5.6	C6-----	5.7	14.4
D-----	18.8	47.8	D-----	-60.0	-152.4

VEHICLE INFORMATION

VEHICLE #1 (FRONT DAMAGE KNOWN)		VEHICLE #2 (SIDE DAMAGE UNKNOWN)	
SIZE-----	3	SIZE-----	4
STIFFNESS-	3	STIFFNESS-	4
SIDE-----	F	SIDE-----	R
HANGL-----	135.0 DEG	HANGL-----	260.0 DEG
WEIGHT----	3276.0 LBS (1485.7 KG)	WEIGHT----	4254.0 LBS (1929.3 KG)
MASS-----	8.478 LB-SEC**2/IN (95.79 NT-SEC**2/CM)	MASS-----	11.009 LB-SEC**2/IN (124.38 NT-SEC**2/CM)
RADIUS		RADIUS	
GYRATION--	3324.0 IN**2 (21445.1 CM**2)	GYRATION--	3741.0 IN**2 (24135.4 CM**2)



U.S. Department of Transportation

National Highway Traffic Safety
Administration

OLDMISS PROGRAM SUMMARY

(All Measurements in Metric)

NATIONAL ACCIDENT SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM

Identifying Title

Primary Sampling Unit DSI-93-AB-013
Case No.-Stratum

01
Accident Event
Sequence No.

9 3
Date (Month, day, year) of Run

OLDMISS Vehicle Identification

Vehicle 1 1990 FORD TAURUS 01
Vehicle 2 1978 MERCEDES BENZ 450 SEL 02
Year Make Model NASS Veh. No.

GENERAL INFORMATION

VEHICLE 1	VEHICLE 2
Size <u>3</u>	Size <u>4</u>
Weight <u>1341</u> + <u>145</u> + <u>0</u> = <u>1486</u> kg Curb Occupant(s) Cargo	Weight <u>1851</u> + <u>79</u> + <u>0</u> = <u>1930</u> kg Curb Occupant(s) Cargo
Damaged Area of Vehicle (F = Front, L = Left, R = Right, B = Back) <u>F</u> Vehicle 1	Damaged Area of Vehicle (F = Front, L = Left, R = Right, B = Back) <u>R</u> Vehicle 2
Vehicle Heading Angles At Impact, in Degrees + <u>135</u> ° Vehicle 1	Vehicle Heading Angles At Impact, in Degrees + <u>260</u> ° Vehicle 2
Stiffness Category for Vehicle <u>3</u> Vehicle 1	Stiffness Category for Vehicle <u>4</u> Vehicle 2

DAMAGE INFORMATION

For Which Vehicle Is The Damage Known <u>1</u>	Crush Measurements Known Vehicle	C ₁ <u>000</u> cm C ₂ <u>000</u> cm C ₃ <u>000</u> cm C ₄ <u>001</u> cm C ₅ <u>002</u> cm C ₆ <u>006</u> cm
PDOF for Known Vehicle in Degrees (-180 to +180) <u>± 000</u> °	Damage Midpoint Offset for Known Vehicle	D <u>⊕ 048</u> cm
Damage Length (L) for Known Vehicle <u>152</u> cm	Estimated Damage Midpoint Offset for Unknown Vehicle	D <u>⊕ 152</u> cm

AIRBAG SUPPLEMENT

1

ACCIDENT SUMMARY

1. Accident Date: [REDACTED] 93

2. Police Investigated

- (1) Yes
(2) No
(3) Unknown

Agency: POLICE

City:

County: [REDACTED]

3. General Locality

- (1) Freeway, Limited Access
(2) Urban (City)
(3) Urban-Rural (mixed)
(4) Rural, Fields

4. Configuration (First Harm)

- (0) Struck Object or Ped
(1) Rear-End
(2) Head-On
(3) Rear-to-Rear
(4) Angle
(5) Sideswipe-Same Direction
(6) Sideswipe-Opposite Dir.
(7) Noncollision
(8) Nonimpact Deployment
(9) Unknown

5. Fire Involved

- (0) None
(1) Airbag Vehicle
(2) Other Vehicle
(3) Both Vehicles
(9) Unknown

6. Vehicles Involved

7. Persons Involved

8. Injured Persons

9. Maximum AIS in Accident

AIRBAG VEHICLE INSPECTION

10. Date Vehicle Inspected: [REDACTED] 93

11. Reason Vehicle Not Inspected

- (0) Not Required
(1) Inspection Completed
(2) Cannot be Located
(3) Repaired or Destroyed
(5) Refusal or Impounded
(7) Other:

12. Impact Data Obtained

- (0) No Data Obtained
(1) CDC Only
(2) Crush Profile Only
(3) Trajectory Data Only
(4) CDC and Crush Profile
(5) CDC and Trajectory
(6) Crush and Trajectory
(7) CDC, Crush, and Trajectory

13. Basis of Delta-V

- (0) Not Computed (Unknown why)
(1) CRASH - Damage Only
(2) CRASH - Damage + Traj
(3) OLDMISS
(4) POLES
(5) Unknown Basis
(6) One Vehicle Beyond Scope
(7) Collision Beyond Scope
(8) Insufficient Data

VEHICLE HISTORY

14. Prior Impacts for AB Vehicle?

- (1) Yes
(2) No
(9) Unknown

15. Prior AB Maintenance or Service

- (1) Yes, (2) No, (9) Unknown

Describe: RECALL - DEFECTIVE A/B MODULE
WAS TO HAVE BEEN REPLACED.

AIRBAG SUPPLEMENT**AIRBAG VEHICLE**Fleet: **NONE**VIN: **1FACP5045LA** ~~xxxxxx~~Mileage: **151,847 Km (94,356 mi)****SYSTEM READINESS LAMP**

16. Pre-Impact Lamp Condition 9
 (1) Functioning/Proved Out
 (2) Inoperative
 (9) Unknown
17. Driver's Report of Pre-Impact Flashing 99
 (00) No Flashing Reported
 (01) Continuous Flashing
 (02) _____
 Number of Flashes: _____
 (11)
 (12) Constant Light
 (19) Flashing, Unknown Number
 (88) Not Applicable, System Removed
 (99) Unknown
18. Period of Pre-Impact Flashing 9
 (0) No Flashing
 (1) Same Day as Impact
 (2) Prior Day
 (3) Prior Two Days
 (4) Prior Week
 (5) Prior Month
 (6) Over One Month
 (9) Unknown
19. Post-Impact Lamp Condition 2
 (1) Functioning/Proved Out
 (2) Inoperative
 (9) Unknown
20. Post-Impact Flashing 88
 (00) No Flashing Reported
 (01) Continuous Flashing
 (02) _____
 Number of Flashes: _____
 (11)
 (12) Constant Light
 (19) Flashing, Unknown Number
 (88) Not Applicable, System Removed
 (99) Unknown

21. Airbag Vehicle First Harmful Event 13
 (01) Fire or explosion
 (02) Immersion
 (03) Gas Inhalation
 (04) Fell from vehicle
 (05) Injured in vehicle
 (06) Other noncollision (specify):
 (07) Overturn
 (08) Jackknife
 COLLISION WITH:
 (09) Pedestrian
 (10) Pedalcyclist
 (11) Railway train
 (12) Animal
 (13) Motor vehicle in transport
 (same roadway)
 (14) Motor vehicle in transport
 (other roadway)
 (15) Parked motor vehicle
 (16) Other type nonmotorist (specify):
 (17) Thrown or falling object
 (18) Boulder
 COLLISION WITH FIXED OBJECT
 (20) Building
 (21) Impact attenuator/crash cushion
 (22) Bridge pier or abutment
 (23) Bridge parapet end
 (24) Bridge rail
 (25) Guardrail
 (26) Concrete traffic barrier
 (27) Median barrier
 (28) Other longitudinal barrier (specify):
 (29) Highway/traffic sign post
 (30) Overhead sign support
 (31) Luminaire/light support
 (32) Utility pole
 (33) Other post, pole, or support
 (34) Culvert
 (35) Curb
 (36) Ditch
 (37) Embankment-earth
 (38) Embankment-rock, stone, or concrete
 (39) Fence
 (40) Wall
 (41) Fire hydrant
 (42) Shrubbery
 (43) Tree
 (44) Other fixed object (specify):
 (45) Pavement surface irregularity
 (99) Unknown

AIRBAG SUPPLEMENT

3

AIRBAG VEHICLE IMPACT SUMMARY

22. Vehicle Role 1
- (0) Noncollision
(1) Striking unit
(2) Struck unit
(3) Both striking and struck
(9) Unknown
23. Manner of Leaving Scene 2
- (1) Driven
(2) Towed-due to damage
(3) Towed-not for damage
(4) Towed-details unknown
(5) Abandoned
(9) Unknown
24. Number of Impact Events 1
- (8) 8 or more
(9) Unknown
25. Rollover φ
- (0) No rollover
(1) First event
(2) Subsequent event
(3) Yes, Unknown event
(9) Unknown
26. Override/Underride φ
- (0) No override/underride
(1) Override - 1st CDC
(2) Override - Other CDC
(3) Underride - 1st CDC
(4) Underride - Other CDC
(9) Unknown

AIRBAG VEHICLE DAMAGE

CODES: (1) Yes, (2) No, (9) Unknown

27. Left Front Fender Damage 2
28. Right Front Fender Damage 1
29. Center Top of Grille Damage 2

FRONT BUMPER E.A. STATUS

30. Left 1
31. Right 3
- (1) Normal
(2) Extended
(3) Partial Compression
(4) Complete Compression
(5) Not Applicable
(9) Unknown

FIRST AIRBAG VEHICLE IMPACT:

32. Configuration 4
- (0) Struck Object or Ped
(1) Rear-End
(2) Head-On
(3) Rear-to-Rear
(4) Angle
(5) Sideswipe-Same Direction
(6) Sideswipe-Opposite Dir.
(7) Noncollision
(8) Nonimpact Deployment
(9) Unknown
33. CDC: 12 FZEW 1
34. Object Contacted: 1978 MERCEDES BENZ 450SEL

PRIMARY/DEPLOYMENT IMPACT:

35. Event Number 1
36. Total Delta-V 1φ KPH
(6mph)
37. Longitudinal Delta-V -1φ KPH
(-6mph)
38. Configuration 4
- See 32 above for codes
39. CDC: 12 FZEW 1
40. Object Contacted: 1978 MERCEDES BENZ 450SEL

AIRBAG SUPPLEMENT

4

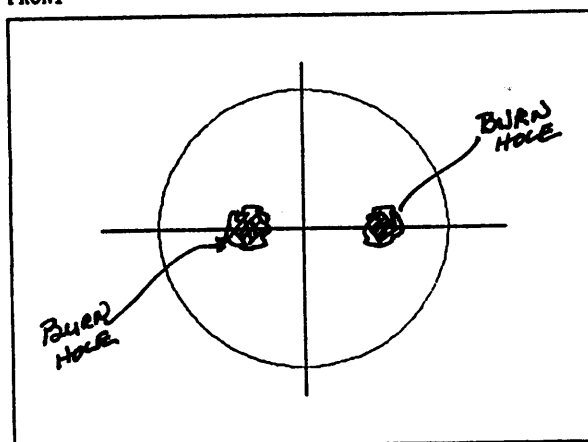
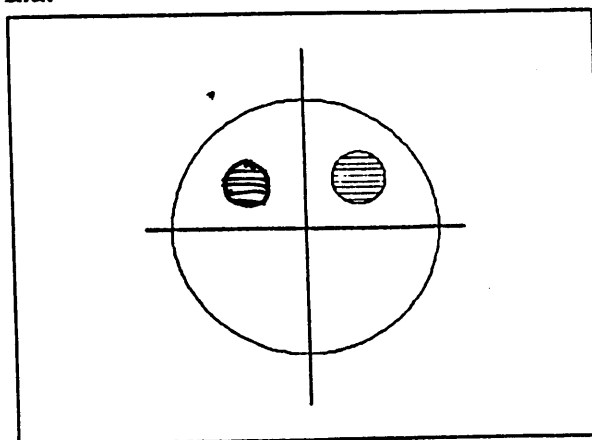
AIRBAG SYSTEM DAMAGE

CODES: (1) Yes, Damaged
 (2) No, Intact
 (3) Not Applicable
 (9) Unknown

- | | |
|---|--|
| 41. Airbag Module | <div style="border: 1px solid black; padding: 2px; display: inline-block;">1</div> |
| 42. Left Front Sensor | <div style="border: 1px solid black; padding: 2px; display: inline-block;">2</div> |
| 43. Center Front Sensor | <div style="border: 1px solid black; padding: 2px; display: inline-block;">2</div> |
| 44. Right Front Sensor | <div style="border: 1px solid black; padding: 2px; display: inline-block;">2</div> |
| 45. Rear Cowl Sensor | <div style="border: 1px solid black; padding: 2px; display: inline-block;">3</div> |
| 46. Diagnostic Module | <div style="border: 1px solid black; padding: 2px; display: inline-block;">2</div> |
| 47. Wiring | <div style="border: 1px solid black; padding: 2px; display: inline-block;">2</div> |
| 48. Knee Diverter | <div style="border: 1px solid black; padding: 2px; display: inline-block;">3</div> |
| 49. Indication of disconnected
or loose electrical
connectors | <div style="border: 1px solid black; padding: 2px; display: inline-block;">2</div> |
| 50. Condition of Deployed Bag | <div style="border: 1px solid black; padding: 2px; display: inline-block;">5</div> |
- (1) Bag intact
 (2) Split or torn
 (3) Cut by object in impact
 (4) Cut after accident
 (5) Other
 (8) NA (not deployed)
 (9) Unknown

DESCRIBE SYSTEM AND BAG DAMAGE:**AIR BAG SUSTAINED BURN HOLES**

NOTE DAMAGE AND CONTACT MARKS ON AIRBAG DIAGRAMS
 BELOW:

FRONT**BACK**

AIRBAG SUPPLEMENT

5

OCCUPANTS OF AIRBAG CAR

51. Number of Occupants in Vehicle 3
52. Number of Injured Persons 1
53. Maximum AIS in Airbag Vehicle 3
- (0) No Injury
- (1-6) AIS Severity
- (7) Injured, unknown severity
- (9) Unknown

DRIVER

Age: 46

Sex: FEMALE

54. Number of Driver Injuries
- 1

55. Source of Best Injury Data 7
- (0) Not injured
- (1) Autopsy
- (2) Hospital Medical Records
- (3) Emergency Room only
- (4) Private physician, clinic
- (5) Lay Coroner Report
- (6) EMS Personnel
- (7) Interviewee
- (8) Police
- (9) Unknown

MAXIMUM AIS BY BODY REGION

REGION	MAX AIS	CONTACT
Head/Neck/Face	<u>3</u>	<u>AIR BAG</u>
Chest	_____	_____
Abdomen	_____	_____
Legs/Hips	_____	_____
Other (Arms)	_____	_____
Driver Maximum	_____	_____

EJECTION NONEExtent: N/APortal: N/A

OTHER VEHICLE:

Maximum AIS 0

Prime/Deploy Impact w AB Vehicle

Event Number 1

CDC: NOT INSPECTEDTotal Delta V (ΔSMPH) 07 KPHMake: MERCEDES BENZModel Year: 1978Model: 450 SELBody Type: 4 DOOR

NOTES:

AIRBAG SUPPLEMENT

6

DRIVER BELT USAGE: (1) Used (2) Not Used (9) Unknown

2Evidence: **REFUSED**

DRIVER POSTURE: Any comments Recorded (1) Yes, (2) No

2

Describe driver's posture and position on seat including specific comments on head, torso, buttocks, legs, and feet. Also note hand and arm position. Did driver brace before crash? Describe:

REFUSED

DRIVER FOREIGN OBJECTS: Comments Recorded (1) Yes, (2) No

2

Was driver wearing contact lenses or eyeglasses? Or holding any foreign object at the time of the impact (packages on lap, pipe, food, bottle, cigarette, etc.)? Did any lenses, objects, or jewelry play any role?:

REFUSED

DRIVER COMMENTS: Comments Recorded (1) Yes, (2) No

2

Was the driver aware that the vehicle was equipped with a supplemental restraint system? Did driver offer any comments on smoke, noise, etc.? Did the driver comment on the airbag as a restraint system? Describe:

REFUSED

PASSENGER-AIRBAG CONTACT: (1) Yes, (2) No, (9) Unknown

2

Describe:

(XX) REFER TO OVERLAY SHEETS

POLICE INFORMATION				ACCIDENT LOCATION			
1. INCIDENT NUMBER				20. COUNTY CODE			
2. AGENCY NAME				21. MUNICIPALITY CODE			
3. STATION/ PRECINCT		4. PATROL ZONE		PRINCIPAL ROADWAY INFORMATION			
5. INVESTIGATOR		BADGE NUMBER		22. ROUTE NO. OR STREET NAME		23. SPEED LIMIT	
6. APPROVED BY		BADGE NUMBER		24. TYPE HIGHWAY		25. ACCESS CONTROL	
7. INVESTIGATION DATE		8. ARRIVAL TIME		INTERSECTING ROAD:			
ACCIDENT INFORMATION				26. ROUTE NO. OR STREET NAME			
9. ACCIDENT DATE		10. DAY OF WEEK		27. SPEED LIMIT		28. TYPE HIGHWAY	
11. TIME OF DAY		12. NUMBER OF UNITS		IF NOT AT INTERSECTION:			
13. # KILLED		14. # INJURED		30. CROSS STREET OR SEGMENT MARKER		31. DIRECTION FROM SITE	
15. PRIV. PROP. ACCIDENT		16. DID VEHICLE HAVE TO BE REMOVED FROM THE SCENE?		32. DISTANCE FROM SITE		33. DISTANCE WAS	
UNIT 1		UNIT 2		MEASURED		ESTIMATED	
Y <input checked="" type="checkbox"/> N <input type="checkbox"/>		Y <input checked="" type="checkbox"/> N <input type="checkbox"/>		34. CONSTRUCTION ZONE		35. TRAFFIC CONTROL DEVICE	
17. VEHICLE DAMAGE		18. HAZARDOUS MATERIALS		36. LEGALLY PARKED		37. REG. PLATE	
0 - NONE		Y <input checked="" type="checkbox"/> N <input type="checkbox"/>		38. STATE		39. VIN	
1 - LIGHT		UNIT 1		UNIT # 2			
2 - MODERATE		UNIT 2		36. LEGALLY PARKED			
3 - SEVERE		UNIT 2		37. REG. PLATE			
19. Y <input type="checkbox"/> N <input checked="" type="checkbox"/>		38. STATE				39. VIN	
UNIT # 1				UNIT # 2			
40. OWNER				40. OWNER			
41. OWNER ADDRESS				41. OWNER ADDRESS			
42. CITY, STATE & ZIP CODE				42. CITY, STATE & ZIP CODE			
43. YEAR				43. YEAR			
44. MAKE				44. MAKE			
45. MODEL - (NOT BODY TYPE)				45. MODEL - (NOT BODY TYPE)			
46. INS. Y <input checked="" type="checkbox"/> N <input type="checkbox"/> UNK <input type="checkbox"/>				46. INS. Y <input checked="" type="checkbox"/> N <input type="checkbox"/> UNK <input type="checkbox"/>			
47. BODY TYPE		48. SPECIAL USAGE		47. BODY TYPE		48. SPECIAL USAGE	
49. VEHICLE OWNERSHIP		50. INITIAL IMPACT POINT		49. VEHICLE OWNERSHIP		50. INITIAL IMPACT POINT	
51. VEHICLE STATUS		52. TRAVEL SPEED		51. VEHICLE STATUS		52. TRAVEL SPEED	
53. VEHICLE GRADIENT		54. DRIVER PRESENCE		53. VEHICLE GRADIENT		54. DRIVER PRESENCE	
55. DRIVER CONDITION		56. DRIVER NUMBER		55. DRIVER CONDITION		56. DRIVER NUMBER	
57. STATE		58. DRIVER NAME		57. STATE		58. DRIVER NAME	
59. DRIVER ADDRESS		60. CITY, STATE & ZIP CODE		59. DRIVER ADDRESS		60. CITY, STATE & ZIP CODE	
61. SEX		62. DATE OF BIRTH		61. SEX		62. DATE OF BIRTH	
63. COMM. VEH. Y <input type="checkbox"/> N <input type="checkbox"/>		64. DRIVER CLASS		63. COMM. VEH. Y <input type="checkbox"/> N <input type="checkbox"/>		64. DRIVER CLASS	
65. DRIVER SS #		66. DRIVER SS #		65. DRIVER SS #		66. DRIVER SS #	
67. CARRIER				67. CARRIER			
68. CARRIER ADDRESS				68. CARRIER ADDRESS			
69. CITY, STATE & ZIP CODE				69. CITY, STATE & ZIP CODE			
70. USDOT #				70. USDOT #			
71. ICS #				71. ICS #			
72. VEH. CONFIG		73. CARGO BODY TYPE		72. VEH. CONFIG		73. CARGO BODY TYPE	
74. GWR		75. NO. OF AXLES		74. GWR		75. NO. OF AXLES	
76. HAZ ARDOUS MATERIALS		77. RELEASE OF HAZ MAT		76. HAZ ARDOUS MATERIALS		77. RELEASE OF HAZ MAT	
Y <input type="checkbox"/> N <input type="checkbox"/> UNK <input type="checkbox"/>		Y <input type="checkbox"/> N <input type="checkbox"/> UNK <input type="checkbox"/>		Y <input type="checkbox"/> N <input type="checkbox"/> UNK <input type="checkbox"/>		Y <input type="checkbox"/> N <input type="checkbox"/> UNK <input type="checkbox"/>	

78. RESPONDING EMS AGENCY

INCIDENT #:

79. MEDICAL FACILITY

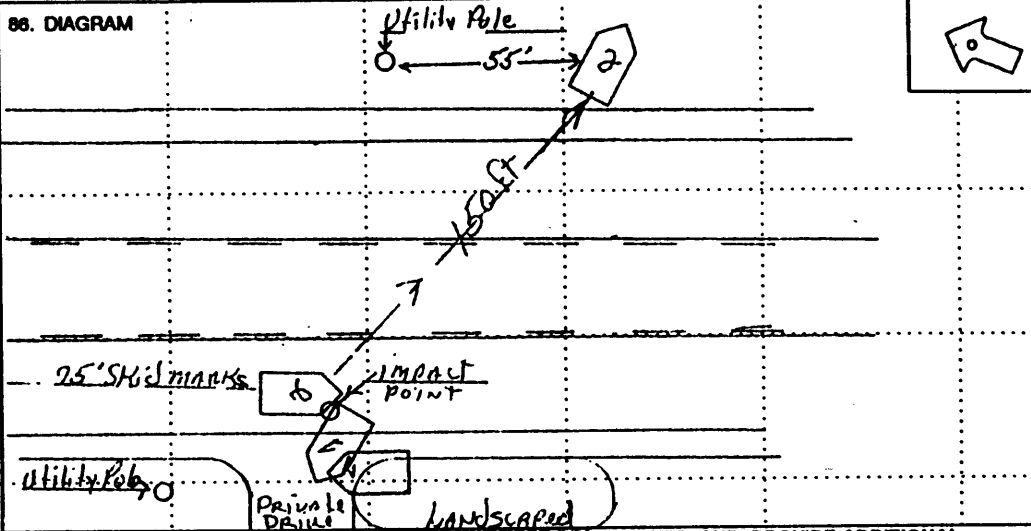
ACCIDENT DATE:

80. PEOPLE INFORMATION

A	B	C	D	E	F	G	NAME	ADDRESS	H	I	J	K	L	M
1	1	M	51	3	0	0	Operator Veh #1		0	0	0	N	0	0
2	1	F	47	3	1	1	Operator Veh #2		2	0	1	7	A	1
2	4	F	9	3	0	0			0	0	0	N	0	0
2	3	F	13	3	0	0			0	0	0	N	0	0

81. ILLUMINATION ☒ 2 82. WEATHER ☐ 0
 83. ROAD SURFACE ☒ 1

86. DIAGRAM



84.

N/A

85. DESCRIPTION OF DAMAGED PROPERTY

OWNER

ADDRESS

PHONE

87. NARRATIVE - IDENTIFY PRECIPITATING EVENTS, CAUSATION FACTORS, SEQUENCE OF EVENTS, WITNESS STATEMENTS, AND PROVIDE ADDITIONAL DETAILS. LIKE INSURANCE INFORMATION AND LOCATION OF TOWED VEHICLES, IF KNOWN.

Operator Veh #1 stated he was turning left from _____ into the driveway of _____ when he was hit by Veh #2.

Operator Veh #2 stated she was traveling South on _____ when Veh #1 turned in front of her, she applied her brakes to avoid collision.

At the scene, impact point was in the south bound lane, 4 ft in from the beam alongside of _____, 60 ft south of utility pole. There were 25' of heavy skid marks associated w/ Veh #2 up to impact point, 9 ft of skid marks beyond impact point from Veh #2. Impact shoved Veh #1 onto a landscaped area. Along the beam of _____ Veh #2 continued across the roadway at an angle of 150 ft, coming to a halt at a position facing East, approx 55' South of utility pole. Veh #2 had evidence of a fire in the steering wheel air bag compartment that had been activated.

INSURANCE INFORMATION		COMPANY		INSURANCE INFORMATION		COMPANY	
UNIT 1	POLICY NO			UNIT 2	POLICY NO		
88. WITNESSES		NAME		ADDRESS		PHONE	
		NAME		ADDRESS		PHONE	
89. VIOLATIONS INDICATED				90. SECTION NUMBERS (ONLY IF CHARGED)			
UNIT 1				UNIT 2			
UNIT 2				UNIT 2			
91. PROBABLE USE		92. TYPE TEST		93. RESULTS		94. INVESTIGATION COMPLETE ?	
UNIT 1		UNIT 2		UNIT 2		YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	

[REDACTED]
[REDACTED]
[REDACTED] 1990 [REDACTED] (U1)

Mr. [REDACTED]
[REDACTED]
National Highway Traffic Safety Administration
Washington, D.C. 20590

Re: Defect Information Report

Dear Mr. [REDACTED]

This Defect Information Report is submitted by [REDACTED]
[REDACTED] pursuant to the provisions of 49 C.F.R. 573.5.

1. Manufacturer

The manufacturer of the items of motor vehicle equipment that are the subject of this report is the [REDACTED] Safety Systems/Mesa operation of [REDACTED]

2. Potentially Defective Equipment Identification

RECEIVED
[REDACTED]
[REDACTED]
The potentially defective equipment consists of certain air bag inflators, some of which were incorporated into driver-side air bag modules, sold by [REDACTED] to automobile manufacturers for use in passenger vehicles. The potentially defective inflators and related air bag modules currently identified are listed on Attachment A hereto. Additional units are expected to be identified within the next 10 days and identifying information concerning those units will be submitted as it becomes available.

The date of manufacture is indicated by the inflator serial number. For example, xxxxl91Cxxxxx indicates the inflator was manufactured on the [REDACTED] day of 1989. If the C were a D, it would indicate that the unit was manufactured in 1990.

3. Potentially Defective Equipment Totals

Attachment A reflects the 183 potentially defective inflators and associated air bag modules identified to date. TRW expects the final count to be approximately double that number.

4. Estimated Percentage of Identified Equipment Units Containing Defects

TRW estimates that approximately 18% of the identified inflators may contain the defect.

5. Defect Description

The potentially defective inflators were installed in driver-side air bag modules which, in turn, were mounted in the center of vehicle steering wheels.

The potential defect consists of undetected damage to threaded inflator components occurring during assembly which may allow the components to separate when the inflator is called upon to deploy. Such a separation could result in injuries to the vehicle occupants.

A more detailed description of the defect can be found in Attachment B hereto.

6. Principal Event Chronology

On [REDACTED] 1990, [REDACTED] received a report that one of its inflators had failed when deployed in a barrier crash test. [REDACTED] immediately commenced an investigation of the reported failure which revealed the presence of the above-described defect.

Between [REDACTED] and [REDACTED] 1990, [REDACTED] advised its customers of the reported incident and kept them apprised of the status of its investigation.

On [REDACTED] 1990, [REDACTED] notified NHTSA of its on-going investigation. NHTSA was also advised that [REDACTED] was investigating a possible link

Mr. [REDACTED]

7/90
Page 3

03

between the defect and certain torque readings recorded during assembly which might permit [REDACTED] to identify inflators likely to have the undetected component damage.

From [REDACTED] until [REDACTED] 1990, [REDACTED] received no further reports of field failures and was unable to duplicate the defect in in-house tests.

On [REDACTED] 1990, [REDACTED] test fired 11 inflators which had been returned from the field to assist in [REDACTED] investigation. Each of the 11 inflators was selected because [REDACTED] had recorded a torque reading during its assembly which was more than 4 standard deviations below the mean value for that inflator's production lot. Three of these inflators were found to have the same defect.

Based on the data obtained from the additional tests, on [REDACTED] 1990, [REDACTED] made the determination that inflators with similar recorded torque readings may contain a defect related to motor vehicle safety.

All vehicle manufacturers to which [REDACTED] sold any potentially defective driver-side inflators, whether or not incorporated into air bag modules, were notified of [REDACTED] determination by telephone on [REDACTED] and [REDACTED] 1990.

7. Existence of a Noncompliance

Not applicable.

8. Program For Remedying The Defect

TRW has recommended to each affected vehicle manufacturer that it should recover from the field and replace all driver-side air bag modules containing potentially defective inflators.

Identifying information concerning the potentially defective inflators has been and will continue to be provided to the vehicle

Mr. [REDACTED]

90

Page 4

04

manufacturers as quickly as the information is generated by [REDACTED]

TRW will make available to the affected vehicle manufacturers replacement inflators or air bag modules as required.

9. Communications to Vehicle Manufacturers

Attachment C hereto is a representative example of the letters being sent to all affected vehicle manufacturers today confirming [REDACTED] determination and recommendation.

The only other written communications sent to more than one vehicle manufacturer concerning the potential defect are those which were provided to NHTSA on [REDACTED] 1990.

Further inquiries to [REDACTED] concerning this matter should be directed to Mr. [REDACTED], Manager of [REDACTED], [REDACTED] Vehicle Safety Systems. He can be reached at [REDACTED]

Sincerely,

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] Occupant Restraint Systems

ATTACHMENT A

05

FORD CENTER POST TRACEABILITY BY MODEL

Page 1

INFLATOR S/N	MODULE S/N		MODULE COLOR	PACK SLIP#	SHIPPING DESTINATN	SHIP DATE	MODEL
1IIV020D20915	1PAT022D20049	^	LT. SANDALWOOD			/90	CRVIC
1IIV020D20794	1PAS022D10236	^	SHADOW BLUE			/90	CRVIC
1IIV020D20817	1PAS022D10194	^	SHADOW BLUE			/90	CRVIC
1IIV020D20897	1PAS022D10351	^	SHADOW BLUE			/90	CRVIC
1IIV020D20960	1PAS022D10302	*	SHADOW BLUE			/90	CRVIC
1IIV025D10009	1PAT025D20143	^	LT. SANDALWOOD			/90	CRVIC
1IIV025D10022	1PAT025D20135	^	LT. SANDALWOOD			/90	CRVIC
1IIV025D10044	1PAT025D20178	^	LT. SANDALWOOD			/90	CRVIC
1IIV026D11143	1PAS026D20112	^	SHADOW BLUE			/90	CRVIC
1IIV026D11156	1PAS026D20051	^	SHADOW BLUE			/90	CRVIC
1IIV026D21881	1PAS029D10160	^	SHADOW BLUE			/90	CRVIC
1IIV034D11301	1PAS034D20131	^	SHADOW BLUE			/90	CRVIC
1IIV032D10031	1PAQ032D20034	^	DK. TITANIUM			/90	CRVIC
1IIV034D10408	1PAS037D10318	^	SHADOW BLUE			/90	CRVIC

ABBREVIATIONS:

TAURS - TAURUS
 GRMAR - GRAND MARQUIS
 T/T - TEMPO/TOPAZ
 CRVIC - CROWN VICTORIA

SYMBOLS:

^ - LISTED ON PREVIOUS SHEETS
 * - NEW ADDITIONS TO SHEET

ATTACHMENT A

06

FORD CENTER POST TRACEABILITY BY MODEL

Page 2

INFLATOR S/N	MODULE S/N		MODULE COLOR	PACK SLIP#	SHIPPING DESTINATN	SHIP DATE	MODEL
1IIV038D22016	1PAQ039D10130	^	DK. TITANIUM			/90	CRVIC
1IIV038D22051	1PAQ039D10169	^	DK. TITANIUM			/90	CRVIC
1IIV038D22066	1PAQ039D10144	^	DK. TITANIUM			/90	CRVIC
1IIV038D22742	1PAQ039D10256	^	DK. TITANIUM			/90	CRVIC
1IIV039D10409	1PAR039D20114	^	CURRANT			/90	CRVIC
1IIV039D11262	1PAR039D20208	^	CURRANT			/90	CRVIC
2IIV037D20411	1PAQ039D10044	^	DK. TITANIUM			/90	CRVIC
2IIV037D20780	1PAR038D20235	^	CURRANT			/90	CRVIC
1IIV038D11424	1PAS040D20048	*	SHADOW BLUE			/90	CRVIC
1IIV038D21793	1PAS040D10049	*	SHADOW BLUE			/90	CRVIC
1IIV040D10486	1PAS043D10106	*	SHADOW BLUE			/90	CRVIC
1IIV094D10418	1PAQ095D10145	*	DK. TITANIUM			/90	CRVIC
1IIV095D10467	1PAQ095D20199	*	DK. TITANIUM			/90	CRVIC
1IIV102D10001	1PAR103D10115	*	CURRANT			/90	CRVIC
1IIV298C10245	1MBN298C20158	^	SHADOW BLUE			5/89	FN-9

ABBREVIATIONS:

TAURS - TAURUS
 GRMAR - GRAND MARQUIS
 T/T - TEMPO/TOPIAZ
 CRVIC - CROWN VICTORIA

SYMBOLS:

^ - LISTED ON PREVIOUS SHEETS
 * - NEW ADDITIONS TO SHEET

ATTACHMENT A

07

FORD CENTER POST TRACEABILITY BY MODEL

Page 3

INFLATOR S/N	MODULE S/N		MODULE COLOR	PACK SLIP#	SHIPPING DESTINATN	SHIP DATE	MODEL
1IIV315C10085	1MBK315C20002	*	MED. TITANIUM			/89	FN-9
1IIV315C10186	1MBN316C10018	^	SHADOW BLUE			/89	FN-9
1IIV313C10697	1MBM318C20094	^	CURRANT			/89	FN-9
1IIV030D21658	1PBN031D10213	^	SHADOW BLUE			/90	FN-9
1IIV038D22196	1PBN039D10043	^	SHADOW BLUE			/90	FN-9
1IIV199C21405	1MAV227C10132	*	TITANIUM			/89	GRMAR
1IIV345C23264	1MAW347C20033	^	CURRANT			/89	GRMAR
1IIV023D21777	1PAW024D10023	*	CURRANT			/90	GRMAR
1IIV033D10281	1PAX033D20011	^	SHADOW BLUE			/90	GRMAR
1IIV037D10352	1PAW037D20019	^	CURRANT			/90	GRMAR
1IIV037D10457	1PAW037D20002	^	CURRANT			/90	GRMAR
1IIV032D11609	1PAW032D20037	^	CURRANT			/90	GRMAR
1IIV043D10615	1PAW043D20249	*	CURRANT			/90	GRMAR
1IIV048D21901	1PAX050D10252	*	SHADOW BLUE			/90	GRMAR
1IIV048D21112	1PAX050D10479	*	SHADOW BLUE			/90	GRMAR
1IIV072D10029	1PAX072D20112	*	SHADOW BLUE			/90	GRMAR
1IIV078D22160	1PAW079D20227	*	CURRANT			/90	GRMAR

ABBREVIATIONS:

TAURS - TAURUS
 GRMAR - GRAND MARQUIS
 T/T - TEMPO/TOPAZ
 CRVIC - CROWN VICTORIA

SYMBOLS:

^ - LISTED ON PREVIOUS SHEETS
 * - NEW ADDITIONS TO SHEET

ATTACHMENT A

08

FORD CENTER POST TRACEABILITY BY MODEL

Page 4

INFLATOR S/N	MODULE S/N	MODULE COLOR	PACK SLIP#	SHIPPING DESTINATN	SHIP DATE	MODEL
1IIV088D20961	1PAZ089D20041	^ DK. CINNABAR			/90	GRMAR
1IIV092D10003	1PAX093D10056	^ SHADOW BLUE			/90	GRMAR
1IIV093D22135	1PAV094D10061	^ DK. TITANIUM			/90	GRMAR
1IIV101D20804	1PAX102D20059	* SHADOW BLUE			/90	GRMAR
1IIV314C20116	1MAM315C10006	^ CURRANT			/89	SABLE
1IIV361C20191	1MAL362C20162	^ EBONY			/90	SABLE
1IIV060D22464	1PAL061D10028	^ EBONY			/90	SABLE
1IIV063D21807	1PAN064D20073	* MED. SANDALWOOD			/90	SABLE
1IIV063D21819	1PAN064D20091	* MED. SANDALWOOD			/90	SABLE
1IIV093D20110	1PBQ094D10326	* TITANIUM			/90	SABLE
1IIV094D10243	1PAO095D10083	* DK. REGATTA BLUE			/90	SABLE
1IIV102D20436	1PBQ106D10235	* TITANIUM			/90	SABLE
1IIV191C10133	1MAM206C10174	* CURRANT			/89	SABLE
1IIV311C20337	1MAL312C10105	* EBONY			/89	SABLE
1IIV002D11680	1MAM003D10171	* CURRANT			/90	SABLE
1IIV038D22432	1PAO039D10103	^ DK. REGATTA BLUE			/90	SABLE

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ATTACHMENT A

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FORD CENTER POST TRACEABILITY BY MODEL

Page 5

INFLATOR S/N	MODULE S/N		MODULE COLOR	PACK SLIP#	SHIPPING DESTINATN	SHIP DATE	MODEL
1IIV038D22533	1PAM039D10049	*	CURRANT			/90	SABLE
1IIV038D22590	1PAM039D10042	*	CURRANT			/90	SABLE
1IIW034D10080	1PAA092D10038	*	BLACK			/90	T/T
1IIV324C10549	1MAJ324C20114	*	DK. REGATTA BLUE			/89	TAURS
1IIV324C10604	1MAJ324C20188	*	DK. REGATTA BLUE			/89	TAURS
1IIV344C22523	1MAJ347C20226	^	DK. REGATTA BLUE			/89	TAURS
1IIV346C12296	1MAJ348C10170	^	DK. REGATTA BLUE			/89	TAURS
1IIV013D10120	1MAH015D10031	*	CURRANT			/90	TAURS
1IIV020D20469	1PAH022D10313	*	CURRANT			/90	TAURS
1IIV020D20502	1PAH022D10276	*	CURRANT			/90	TAURS
1IIV020D20523	1PAH022D10309	*	CURRANT			/90	TAURS
1IIV020D20527	1PAH022D10242	*	CURRANT			/90	TAURS
1IIV020D20561	1PAH022D10246	*	CURRANT			/90	TAURS
1IIV020D20581	1PAH022D10244	*	CURRANT			/90	TAURS
1IIV020D20600	1PAH022D10232	*	CURRANT			/90	TAURS
1IIV020D20612	1PAH022D10218	*	CURRANT			/90	TAURS
1IIV020D20623	1PAH022D10376	*	CURRANT			/90	TAURS

ABBREVIATIONS:

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 T/T - TEMPO/TOFAZ
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ATTACHMENT A

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FORD CENTER POST TRACEABILITY BY MODEL

Page 6

INFLATOR S/N	MODULE S/N		MODULE COLOR	PACK SLIP#	SHIPPING DESTINATN	SHIP DATE	MODEL
1IIV020D20724	1PAH022D10336	^	CURRANT			/90	TAURS
1IIV020D20910	1PAJ022D10351	^	DK. REGATTA BLUE			/90	TAURS
1IIV020D20981	1PAH022D20158	^	CURRANT			/90	TAURS
1IIV020D21034	1PAH022D20140	^	CURRANT			/90	TAURS
1IIV020D21086	1PAJ022D10462	*	DK. REGATTA BLUE			/90	TAURS
1IIV020D21105	1PAJ022D10450	*	DK. REGATTA BLUE			/90	TAURS
1IIV025D10463	1PDP025D20244	^	TITANIUM			/90	TAURS
1IIV026D10483	1PDP026D20034	^	TITANIUM			/90	TAURS
1IIV026D10480	1PAG026D20037	*	EBONY			/90	TAURS
1IIV033D10795	1PAJ033D20060	*	DK. REGATTA BLUE			/90	TAURS
1IIV034D20556	1PDP036D10133	*	TITANIUM			/90	TAURS
1IIV036D10140	1PAH036D20190	*	CURRANT			/90	TAURS
1IIV036D10174	1PAH036D20153	*	CURRANT			/90	TAURS
1IIV040D22052	1PAJ043D20101	*	DK. REGATTA BLUE			/90	TAURS
1IIV043D10424	1PAJ043D20222	*	DK. REGATTA BLUE			/90	TAURS

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ATTACHMENT A

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FORD CENTER POST TRACEABILITY BY MODEL

Page 7

INFLATOR S/N	MODULE S/N		MODULE COLOR	PACK SLIP#	SHIPPING DESTINATN	SHIP DATE	MODEL
1IIV043D11771	1PDP044D10060	*	TITANIUM			/90	TAURS
2IIV037D20303	1PAG038D20045	*	EBONY			/90	TAURS
2IIV037D20326	1PAG038D20176	*	EBONY			/90	TAURS
2IIV037D20494	1PAG038D20048	*	EBONY			/90	TAURS
1IIV064D10127	1PAG065D10048	^	EBONY			/90	TAURS
1IIV085D21533	1PAJ087D10010	^	DK. REGATTA BLUE			/90	TAURS
1IIV092D20388	1PAJ093D20281	^	DK. REGATTA BLUE			/90	TAURS
1IIV093D20006	1PAJ094D20257	*	DK. REGATTA BLUE			/90	TAURS
1IIV093D20405	1PAG094D10494	^	EBONY			/90	TAURS
1IIV311C10758	1MAG311C20134	^	EBONY			/89	TAURS
1IIV314C20026	1MAG315C10094	^	EBONY			/89	TAURS
1IIV018D20025	1PAJ017D10310	*	DK. REGATTA BLUE			/90	TAURS
1IIV018D20261	1PAI019D20067	*	MED. SANDALWOOD			/90	TAURS
1IIV020D21137	1PAJ022D10352	^	DK. REGATTA BLUE			/90	TAURS
1IIV020D21169	1PAJ022D10381	^	DK. REGATTA BLUE			/90	TAURS

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FORD CENTER POST TRACEABILITY BY MODEL

Page 8

INFLATOR S/N	MODULE S/N		MODULE COLOR	PACK SLIP#	SHIPPING DESTINATN	SHIP DATE	MODEL
1IIV023D10492	1PAH023D20099	*	CURRANT			/90	TAURS
1IIV023D20856	1PAJ024D10003	*	DK. REGATTA BLUE			/90	TAURS
1IIV025D11074	1PAI025D20352	^	MED. SANDALWOOD			/90	TAURS
1IIV026D10011	1PAI026D20022	^	MED. SANDALWOOD			/90	TAURS
1IIV026D10046	1PAI026D20018	^	MED. SANDALWOOD			/90	TAURS
1IIV026D10092	1PAI026D20044	^	MED. SANDALWOOD			/90	TAURS
1IIV026D10375	1PAI026D20168	^	MED. SANDALWOOD			/90	TAURS
1IIV033D10087	1PAH033D20012	*	CURRANT			/90	TAURS
1IIV033D10112	1PAH033D20038	^	CURRANT			/90	TAURS
1IIV033D10131	1PAH033D20048	*	CURRANT			/90	TAURS
1IIV033D10165	1PAH033D20153	^	CURRANT			/90	TAURS
1IIV033D10660	1PAH034D20204	*	CURRANT			/90	TAURS
1IIV033D11224	1PAJ037D10045	*	DK. REGATTA BLUE			/90	TAURS
1IIV034D10015	1PDP037D10261	*	TITANIUM			/90	TAURS
1IIV036D11054	1PAJ037D10077	*	DK. REGATTA BLUE			/90	TAURS

ABBREVIATIONS:

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FORD CENTER POST TRACEABILITY BY MODEL

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INFLATOR S/N	MODULE S/N		MODULE COLOR	PACK SLIP#	SHIPPING DESTINATN	SHIP DATE	MODEL
1IIV037D10150	1PAH037D20085	*	CURRANT			/90	TAURS
1IIV037D10186	1PAH037D20094	*	CURRANT			/90	TAURS
1IIV038D21718	1PAI039D10115	^	MED. SANDALWOOD			/90	TAURS
1IIV038D21720	1PAI039D10125	^	MED. SANDALWOOD			/90	TAURS
3IIV041D10459	1PDP043D10488	*	TITANIUM			/90	TAURS
1IIV064D10043	1PAG065D10207	^	EBONY			/90	TAURS
1IIV065D10446	1PAH066D20334	^	CURRANT			/90	TAURS
1IIV074D10486	1PDP075D10219	^	TITANIUM			/90	TAURS
1IIV088D21927	1PDP089D20082	^	TITANIUM			/90	TAURS

ABBREVIATIONS:

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SYMBOLS:

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G.M. CENTER POST TRACEABILITY BY MODEL

Page 1

INFLATOR S/N	MODULE S/N	MODULE COLOR	PACK SLIP#	SHIPPING DESTINATION	SHIP DATE	MODEL
GIIJ144C10422	AB8823IBJAAZ24	VR DK SAPPHIRE			/89	CAD
1IPC289C20673	AB8825IBJABK22	MED ANTELOPE			/89	CAD
1IIJ228C10010	AB8823IBJADS44	VR DK SAPPHIRE			/89	CAD
1IIJ229C10278	AB9768IBJACM73	MED SLATE			/89	CAD
1IPC311C20142	AB9768IBJAEQ31	MED SLATE			/89	CAD
1IPC314C10323	AB8823IBJAJI52	VR DK SAPPHIRE			/89	CAD
1IPC314C11359	AB8823IBJAJJ07	VR DK SAPPHIRE			/89	CAD
1IPC314C11463	AB8823IBJAJJ57	VR DK SAPPHIRE			/89	CAD
1IPC370C20777	AB8823IBJAKI37	VR DK SAPPHIRE			/89	CAD
1IPC345C20703	AB8827IBJAJJ18	GARNET RED			/89	CAD
1IPC363C10068	AB8827IBKAAE91	GARNET RED			/90	CAD
1IPC018D20059	AB8827IBKABS03	GARNET RED			/90	CAD
1IPC018D20218	AB8827IBKABS13	GARNET RED			/90	CAD
1IPC018D20480	AB8827IBKABS12	GARNET RED			/90	CAD
1IPC030D10722	AB8823IBKABZ47	VR DK SAPPHIRE			/90	CAD
1IPC031D20368	AB8827IBKABZ43	GARNET RED			/90	CAD
1IPC032D21671	AB8825IBKAAO12	MED ANTELOPE			/90	CAD

ABBREVIATIONS:

CAD - CADILLAC
 RIV - RIVIERA
 REA - REATTA
 OLDE - OLDSMOBILE "E"

G.M. CENTER POST TRACEABILITY BY MODEL

Page 2

INFLATOR S/N	MODULE S/N	MODULE COLOR	PACK SLIP#	SHIPPING DESTINATION	SHIP DATE	MODEL
1IPC032D21850	AB8823IBKACI76	VR DK SAPPHIRE			/90	CAD
1IPC037D20270	AB9765IBKAAD89	DK SIENNA			/90	CAD
1IPC037D20205	AB8822IBKAAM06	BLACK			/90	CAD
1IPC037D20570	AB9764IBKAAE52	DK ANTELOPE			/90	CAD
1IPC037D20712	AB8827IBKACO58	GARNET RED			/90	CAD
1IPC037D20502	AB8823IBKACQ37	VR DK SAPPHIRE			/90	CAD
1IPC038D20570	AB8823IBKACQ55	VR DK SAPPHIRE			/90	CAD
1IPC043D10060	AB9768IBKAAY88	MED SLATE			/90	CAD
1IPC043D10087	AB9768IBKAAY77	MED SLATE			/90	CAD
1IPC041D20232	AB8823IBKACU21	VR DK SAPPHIRE			/90	CAD
1IPC038D20051	AB8827IBKACX21	GARNET RED			/90	CAD
1IIJ240C20820	AB8823IBJADR68	VR DK SAPPHIRE			/90	CAD
1IPC293C10431	AB9584IDJAAD89	BLACK			/89	OLDE
1IPC345C20279	AB9584IDJAAG49	BLACK			/89	OLDE
1IPC015D10086	AB0720IEKAAB25	MED. SLATE			/90	REA
1IPC026D20040	AB9641IEKAAC40	MED BEECHWOOD			/90	REA
1IPC033D21692	AB9641IEKAAD20	MED BEECHWOOD			/90	REA
1IPC307C20547	AB9637IEJAAU77	GARNET RED			/89	RIV

ABBREVIATIONS:

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 REA - REATTA
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G.M. CENTER POST TRACEABILITY BY MODEL

Page 3

INFLATOR S/N	MODULE S/N	MODULE COLOR	PACK SLIP#	SHIPPING DESTINATION	SHIP DATE	MODEL
1IPC314C11305	AB9635IEJAAD34	DK AUBURN			7/89	RIV
1IPC032D20463	AB9640IEKAAD25	MED SLATE			5/90	RIV
1IPC038D20326	AB9636IEKAAE64	VR DK SAPPHIRE			7/90	RIV
1IPC094D20049	AB9637IEKAAU19	GARNET RED			4/90	RIV

ABBREVIATIONS:

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REA - REATTA
OLDE - OLDSMOBILE "E"

Honda Center Post Traceability Log

Inflator	S/N	Honda Module S/N	Pack Slip No.	Shipping Destination	Ship Date
2HHA212C20498		E89G05014			
1HHF286C20027		E99J00680			/89
1HHF320C10500		E99K00443			/89
1HHE039D20232		E8AB01275			/90
1HHF071D20785		E9AC00551			/90
1HHE089D10078		E8AC03687			/90
1HHF071D20253		E9AC01020			
1HHE016D21715		E8AA03656			/90
1HHE089D10432		E8AC03920			/90

ATTACHMENT A

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MAZDA CENTER POST TRACEABILITY LOG SHEET

Page 1

<u>INFLATOR S/N</u>	<u>MODULE S/N</u>	<u>PACKING SLIP #</u>	<u>SHIPPING DESTINATION</u>	<u>SHIP DATE</u>
1HHG273C10074				/89
1HHG273C10177				/89

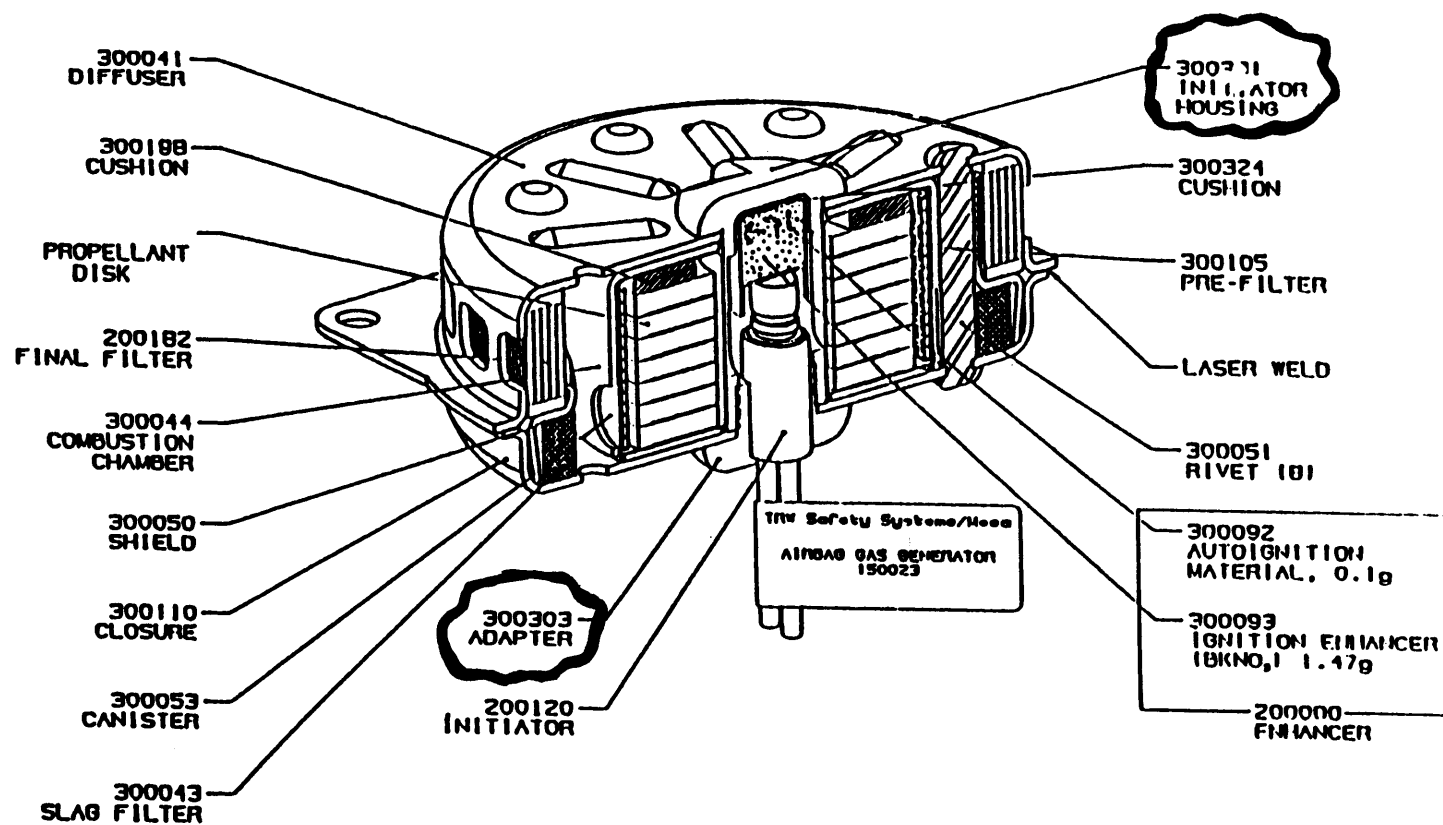
ATTACHMENT B

Drawing B-1 depicts the components and construction of the subject air bag inflator. Drawing B-2 is an enlargement of the structure running through the middle of the inflator, sometimes referred to as the centerpost. The centerpost is constructed from two threaded components, the Initiator Housing on the front side and the Adaptor on the back side of the inflator. In one of the last steps of the assembly of the inflator, the Housing and Adaptor are inserted from opposite sides and mechanically torqued together.

The defect consists of damage to the threads of the Housing and Adaptor which occurred due to incorrect engagement of the Adaptor and Housing threads as they were torqued together. Specifically, the threads deformed each other, flattening the crowns and filling the grooves. This condition is sometimes referred to as "cross-threading." In spite of the thread damage occurring, there was sufficient thread engagement remaining to allow the Housing and Adaptor to pull together and remain joined tightly enough to make the damage undetectable until the inflator deployed.

CROSS SECTION VIEW OF INFLATOR

SERIES 90 DRIVER INFLATOR

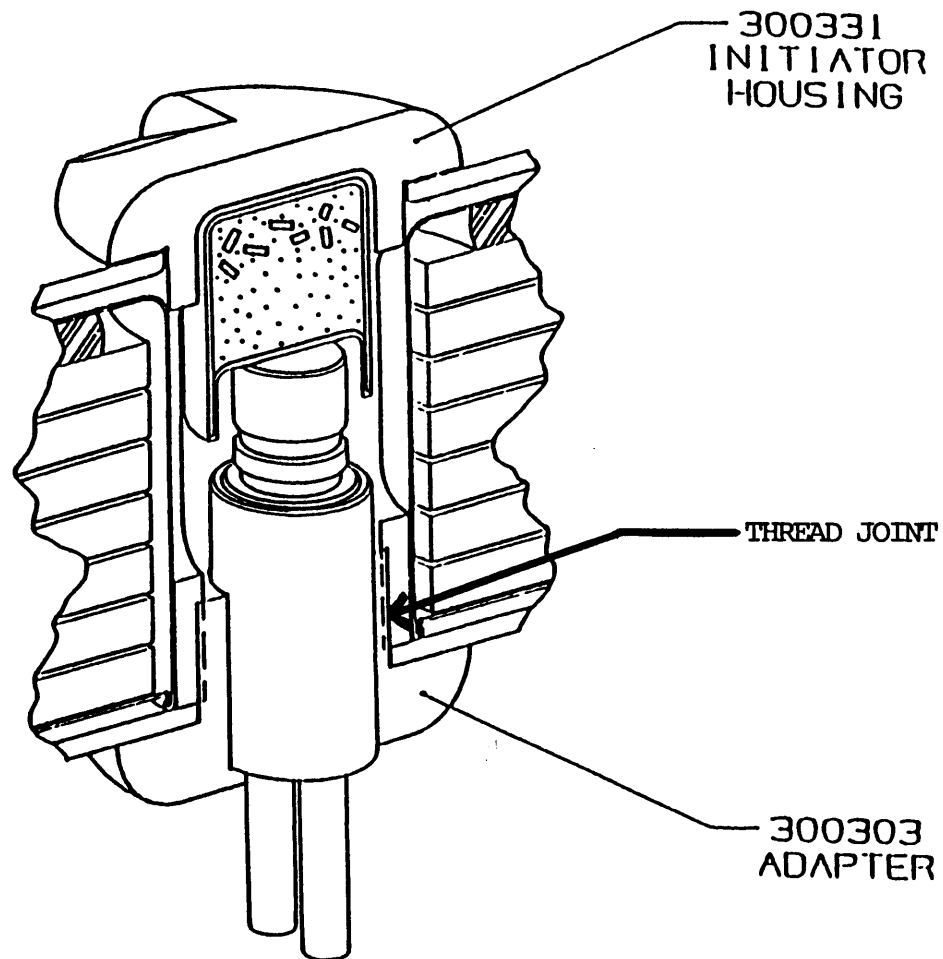


DRAWING B-1

TRW Safety Systems/Mesa

CROSS SECTION VIEW OF ADAPTER AND HOUSING

BEST AVAILABLE COPY



DRAWING B-2

Safety Systems/Mesa

ATTACHMENT C

[REDACTED] 1990

[Name & Address of [REDACTED] Contact]

Re: Driver-Side Air Bag Defect Determination

Dear _____,

This will confirm [REDACTED]'s telephonic notice to you last week that we have determined that certain of the air bag inflators [installed in driver-side air bag modules] sold to you for installation in passenger vehicles potentially contain a defect related to motor vehicle safety. The requisite report to the NHTSA concerning that determination will be submitted today.

Although we are still reviewing our records to identify all such potentially defective inflators, a list of the affected inflators and modules presently identified is enclosed. We expect to be able to advise you of any additional units potentially containing the subject defect within 10 days.

TRW recommends that you take immediate steps to recover the identified inflators and return them to our [REDACTED] Safety Systems/Mesa facility.

Sincerely,

[Name]
[Title]

cc: [Any other [REDACTED] employee who was notified of [REDACTED] recommendation or who should receive a copy of the confirmation]

[REDACTED]

Director
Automotive Safety Office
Environmental and Safety
Engineering Staff

[REDACTED]

[REDACTED]

[REDACTED] 1990

[REDACTED]

National Highway Traffic Safety Administration
400 Seventh Street, S. W.
Washington, D. C. 20590

Pursuant to Part 573 of Title 49 of the Code of Federal Regulations - Defect and Noncompliance Reports, [REDACTED] is submitting information concerning a safety-related recall it is initiating. Specific information is as follows:

573.5(C)(2)

Certain 1990 model year Continental, Taurus, Sable, Crown Victoria, Grand Marquis, Tempo, and Topaz vehicles; and 1991 model year Crown Victoria and Grand Marquis vehicles equipped with a driver side supplemental air bag that were produced between [REDACTED] 1989 and [REDACTED] 1990.

573.5(C)(3)

Approximately 55,000 units.

573.5(C)(4)

Approximately one quarter of one percent.

573.5(C)(5)

It is believed that up to 133 potentially defective driver side air bag modules may have been shipped to Ford assembly plants and installed in the above noted vehicles. The threaded joint of the center post housing and adapter of the air bag inflaters in these modules may have sustained undetected damage caused by cross threading during assembly. If a vehicle with an air bag module having severely damaged center post threads is involved in a deployment-level collision, it is possible that the center post housing may separate from the adapter. If a separation occurs, the air bag would not inflate properly and would not restrain the driver as intended. In

[REDACTED]
[REDACTED] 1990
Page 2

(2)

addition, hot combustion gases also would flow directly through the air bag rather than through the normal filtering and cooling devices, presenting the possibility of burn injury to vehicle occupants.

573.5(C)(6)

A barrier crash test of a future model year vehicle during late [REDACTED] 1990 resulted in a separation of the vehicle's production-level air bag inflator center post housing and adapter. Subsequent analyses of the separated parts revealed significant damage to the threads in the housing to the adapter joint. This damage was determined to be consistent with cross threading during assembly of the center post housing and adapter. However, efforts to replicate the observed thread damage in assembly in order to isolate the cause of the damage were unsuccessful. Further laboratory analyses and deployments of units recovered from the field revealed some units with thread damage, but no deployment separations were reproduced until mid [REDACTED] 1990 when three additional units experienced separation during laboratory deployment. Based upon our analysis of the torque characteristics of these units, it has been determined that while all units are within specification, approximately 133 units installed on Ford products might have undetected damaged threads constituting a potential defect.

We are not aware of any reports of inflator center post separations or injuries associated with this condition during air bag deployment in collisions involving Ford vehicles.

573.5(C)(8)

Owners of record will be notified of the condition and will be instructed to return the vehicles to dealers for inspection of the driver supplemental air bag module. Suspect modules, which can be identified by serial numbers located on the back surface of the module, will be replaced. There will be no charge to owners for this service.

573.5(C)(9)

Ford plans to make a public statement concerning the subject of this recall. Copies of the notification letters to dealers and owners from Ford Parts and Service Division will be forwarded when available.

Very truly yours,
[REDACTED]
[REDACTED]

RECALLS [REDACTED]

DRAFT

This notice is sent to you in accordance with the requirements of the National Traffic and Motor Vehicle Safety Act.

has determined that a defect which relates to motor vehicle safety exists in certain 1990/91 Crown Victoria, Grand Marquis, Taurus, Sable, Tempo, Topaz and Continental cars.
(CARS WILL BE LISTED SEPARATELY IN MAILED LETTERS)

SAFETY DEFECT

The driver's side supplemental air bag may not inflate properly when activated during a crash or collision.

PROBLEM

The combustion gas which inflates the air bag may not flow into the bag as intended. Should this occur, the air bag may not inflate properly to restrain the driver.

The gas could also flow into the passenger compartment and present the possibility of burn injury to vehicle occupants.

PLEASE NOTE

Even though your car is equipped with a supplemental air bag, Ford urges you to always use the seat/shoulder belt for proper protection in the event of a collision.

REPAIRS

At no cost to you, your dealer will inspect and if necessary replace the air bag in your car.

HOW LONG WILL IT TAKE?

The time needed to inspect your car is less than one hour. However, due to service scheduling times, your dealer may need your car for one full working day.

RENTAL CAR ALLOWANCE

If the air bag must be replaced, your dealer will provide you with a free (except for fuel) rental car until your car is ready.

Air bag replacements will require an additional 2 to 4 days because your dealer must special order the correct air bag module color for your car.

Draft of 1990

DRAFT**CALL YOUR DEALER**

Call your dealer without delay. Ask for a service date.

When you bring your car in, give the dealer this letter.

If you misplace this letter, your dealer will still do the work, free of charge.

**CHANGED ADDRESS
OR SOLD THE CAR?**

If you have, please fill out enclosed prepaid postcard and mail it to us.

If the dealer doesn't make the repair promptly and without charge, you should contact the [REDACTED] whose address is shown in your Owner Guide booklet. You also may send a complaint to the Administrator, National Highway Traffic Safety Administration, 400 Seventh Street, SW, Washington, DC 20590 or call the toll free Auto Safety Hotline [REDACTED] (Washington DC area residents may call [REDACTED])

We regret the inconvenience this service may cause you, but we want you to have the work done for your safety and satisfaction with your Ford-built car.

Sincerely,

[REDACTED]

Draft of October 31, 1990

Manager
Parts and Service Engineering
Ford Parts and Service Division

Vehicle ID #: [REDACTED]

[REDACTED], 1990

MS [REDACTED]

This notice is sent to you in accordance with the requirements of the National Traffic and Motor Vehicle Safety Act.

[REDACTED] has determined that a defect which relates to motor vehicle safety exists in certain 1990 Taurus/Sable cars.

Safety Defect:

The driver's side supplemental air bag may not inflate properly when activated during a crash or collision.

Problem:

The combustion gas which inflates the air bag may not flow into the bag as intended. Should this occur, the air bag may not inflate properly to restrain the driver.

The gas could also flow into the passenger compartment and present the possibility of burn injury to vehicle occupants.

Please Note:

Even though your car is equipped with a supplemental air bag, Ford urges you to always use the seat/shoulder belt for proper protection in the event of a collision.

Repairs:

At no cost to you, your dealer will inspect and if necessary replace the air bag in your car.

How Long Will It Take?

The time needed to inspect your car is less than one hour. However, due to service scheduling times, your dealer may need your car for one full working day.

Rental Car Allowance:

If the air bag must be replaced, your dealer will provide you with a free (except for fuel) rental car until your car is ready.

Air bag replacements will require an additional 2 to 4 days because your dealer must special order the correct air bag module color for your car.

**Call Your
Dealer:**

Call your dealer without delay. Ask for a service date.

When you bring your car in, give the dealer this letter.

If you misplace this letter, your dealer will still do the work, free of charge.

**Changed Address
Or Sold The Car?**

If you have, please fill out the enclosed prepaid postcard and mail it to us.

If the dealer doesn't make the repair promptly and without charge, you should contact the [REDACTED] whose address is shown in your Owner Guide booklet. You also may send a complaint to the [REDACTED] National Highway Traffic Safety Administration, [REDACTED] Washington, DC 20590 or call the toll free Auto Safety Hotline [REDACTED] (Washington DC area residents may call [REDACTED])

We regret the inconvenience this service may cause you, but we want you to have the work done for your safety and satisfaction with your Ford-built car.

Sincerely,
[REDACTED]